THE CHEMIST AND DRUGGIST

ESTABLISHED 1859.

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THE CHEMISTS' AND DRUGGISTS' DIARY, 1888, is now being prepared. It will be one of the most popular and permanent of the series, and will certainly far exceed the circulation of any preceding issue. Advertisements to appear in this book should be sent in at once.

ADVERTISEMENTS of employers and assistants can be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.

WE hear that one of the auditors of the B. P. C. in going through last year's accounts was so forcibly struck with the great falling off of members that he made a special note of it in his report.

ADVANCE IN EAU DE COLOGNE.—In consequence of the new German Spirit Law the price of eau de Cologne will be considerably raised. After October 1 bottles which previously cost, in Germany, 1 mark will be sold for 1 40 mark.

THE Pharmacy Board of Victoria has prosecuted a limited co-operative store, and has secured a first victory before the magistrates. The store raised the defence that they dispensed for their members only; if by inadvertence any of their servants supplied any one but a member, it was in opposition to the express orders of the directors, and the latter could not be legally responsible. It was shown, however, that any one could become a member by payment of half-a-crown, and the bench decided that the defendants were infringing the Pharmacy Act.

Suggestions.

(*We invite contributions to this column.*)

BURNS.—A spray of seltzer water directed on the burnt part from a syphon is said to give instant relief.

ANTIPYRIN is achieving good results in curing headaches, while salol is equally efficacious in rheumatism and similar troubles.

STYES.—A solution of boracic acid, 1 part in 30 of water, applied frequently to the eyelid, effects a rapid cure, and prevents recurrence of the trouble.

MINERAL OIL is said to be an adulterant of cod-liver oil. It can be detected by saponification. The mineral oil does not saponify.

FOR bilious headache Dr. John Ogilvy (Bournemouth) recommends 8-grain doses of antipyrin, given hourly for five or six doses. It cuts short the attack and lessens the frequency of the occurrence.

BENZIN, according to the *Pharm. Era*, may be deodorised by shaking up with a tenth of its volume of any vegetable oil and distilling slowly. The oil retains the strong-smelling bodies.

DO NOT liquefy carbolic acid by the addition of a spirit; the power of carbolic acid as a disinfectant is in great part impaired, if not entirely destroyed, by admixture with alcohol.

PLASTER CEMENT.—By mixing gypsum with a small quantity of certain salts, such as alum, borax, and sulphate of potash, it is rendered capable of bearing a higher temperature than ordinary gypsum without injury, and the character of the plaster produced is really that of a cement.

INK STAINS.—Solution of chlorinated lime 1 oz. with two drops of acetic acid is used in many offices to remove ink from paper or parchment. Apply a drop of solution to the writing without rubbing; when the ink has disappeared the fluid is taken up with a blotter. The same fluid may be used for lace and other white goods.

DEODORISING AND ABSORBENT POWDER.—A mixture of equal parts of camphor and animal charcoal is recommended by Barbocci for preventing the offensive odour and removing the pain of old excavated ulcers. The camphor is stated to act as a disinfectant, and the charcoal absorbs the offensive odours.

SUMACH INK.—The leaves of *Rhus glabra* contain tannin matters, and, according to Mr. O. J. Lache, afford a good ink by boiling 1 oz. of the bruised leaves for half an hour in 1 pint of water and straining. Ninety grains of sulphate of iron and 60 grains of gum arabic are added. Keep it for two weeks before using it.

ICE POULTICE.—Spread a layer of linseed meal three-fourths of an inch deep on a cloth of proper size, and put pieces of ice the size of a marble on the meal at intervals of an inch; then sprinkle lightly with the meal, cover with a cloth and turn over the edges; apply the thick surface to the skin. The meal protects the skin and excludes the air from the ice, thus preventing melting.

ADHESIVE PASTE.—The paste used by the United States Government for gumming postage-stamps is made by the formula given below. It has the properties of being very adhesive, does not become brittle or scale off, and is well adapted for sticking paper labels to tin and other metals. Take of starch, 2 drachms; white sugar, 1 ounce; gum-arabic, 2 drachms; water, q.s. Dissolve the gum, add the sugar, and boil until the starch is cooked.

LABELS ON TIN.—A correspondent says that the way to make labels adhere to tin is to give the tins a coat of thin varnish. Anything that is deliquescent in the paste causes the tins to become rusty and the labels look foxy. He has sometimes had trouble with customers for infants' food, who remarked that the food was old, being led to this opinion by the rusty spots on the labels. Infants' food makers should take a note of this.

Metropolitan Reports.

FIRES.—On Saturday last the extensive premises of Messrs. J. & W. Bygrave, shop-fitters, 3 Cropley Street, Hoxton, caught fire from an unknown cause. The firemen were called up by the fire alarm and special messengers, and found the back workshops of two floors, about 30 ft. by 20 ft. in dimensions, ablaze in the ground floor. It was late before the fire was extinguished, and then not until severe damage had been caused.—A serious fire occurred early on Thursday morning, originating at some large clothing stores in Holborn. Among the neighbouring shops which sustained injury was that of Henry Kimpton, medical bookseller.

A BONESETTER'S PORTER IN TROUBLE.—At the Central Criminal Court on the 16th inst., Robert Burkett Hunter (36) was found guilty of forging and uttering cheques for 7*l*. 7*s*. and 10*l*., and was sentenced to twelve months' imprisonment. The prisoner for several years was in the service of the late Mr. R. H. Hutton, the bonesetter, and after that gentleman's death he appeared to have made representations that he had succeeded to his practice. Mrs. Hutton was called to prove that the prisoner was employed by her late husband to open the door for customers, and occasionally he wrote letters making appointments.

A CANISTER OF PRUSSIC ACID.—At the Southwark Police Court on the 15th inst., James Cawley was charged with attempting to commit suicide by taking prussic acid. Mr. E. Fountain, surgeon, who had attended the accused, stated he told him he had taken prussic acid, and produced a canister which had contained it. The symptoms suggested that he was telling the truth, and he administered an emetic and brought him round. The magistrate thought it necessary to supplement this marvellous cure by a week's ministrations of the prison chaplain.

SUDDEN DEATH OF A CHEMIST.—On the 16th inst. Dr. G. Danford Thomas held an inquest touching the death of John Northway, 65 years of age, a chemist, lately residing at 89 Guildford Street, and carrying on business at 134 Theobald's Road, Holborn. The widow stated that her husband, who had been ailing, returned home at eleven on Sunday night, and after smoking a pipe in the house with a friend retired to rest. He occupied a separate bedroom, owing to his restlessness during the night. He bade her "Good night," and went into his own bedroom. At breakfast time on Monday morning he failed to appear at the breakfast-table, and shortly after nine the witness discovered him dead, lying in bed. He lay calmly and placidly, as though he were asleep. Medical evidence showed that death resulted from syncope whilst deceased was suffering from heart disease. The jury returned a verdict accordingly.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BEDWORTH.

SUICIDE OF A MEDICAL MAN.—An inquest has been held at Bedworth on the body of Charles Herbert Ford, a medical man (L.R.C.S.I.), thirty-three years of age, who died from the effects of a large dose of morphia. From the evidence of Alice Georgina Ford, widow of the deceased, it appears he had complained of rheumatism, and while very despondent went into his surgery, took up a bottle containing a solution of morphia, and poured some of the contents into a glass, remarking that it was about 3 drachms, and after taking it, that he should not be alive in the morning. She wished him to take an emetic, but he refused, saying that it was all right, and that he would sleep until one o'clock next day. During the night she became alarmed and called Dr. Hammond, of Nuneaton, who also gave evidence at the inquest. He stated that the deceased had taken 3 drachms of the solution of morphia. The dose would contain 18 grains of morphia, [evidently the solution was the official hypodermic one. ED.] the ordinary dose being ¼ grain. Such a dose as the deceased took would, in all probability, produce death in the case of a very ardent opium-taker. Nearly twelve hours had elapsed from the time the deceased took the dose until Dr. Hammond saw him, and in his opinion it would have been impossible to have saved his life after the dose had been taken three or four hours. It was also stated that Mr. Ford had been accustomed to take morphia to get sleep; consequently his wife was not greatly alarmed until some time after he had taken the fatal dose. He had recently been an applicant for the surgeonship of some local clubs, and had been depressed in consequence of failing to obtain the appointment. The jury found that the deceased destroyed himself while of unsound mind.

BIRMINGHAM.

CAMPHOR WATER.—I am informed, writes a correspondent, that this preparation is not held in good repute at a large institution in this town, where ophthalmic solutions such as of eserine and atropine are largely used. The medical staff have condemned its use absolutely for ophthalmic purposes because of its injurious effect on the eyes of the patients.

CURIOUS COINCIDENCE.—A well-known pharmacist here makes a special preparation of podophyllin, and on his counter he has placed in a glass case a specimen of the podophyllum rhizome. One of the leading medical men of the town called in the shop the other day, and, seeing the drug, exclaimed, "What a nice sample of ipecacuanha!" [It is somewhat strange that a United States physician is reported to have made this same bold attempt at pharmacognosy.—ED.]

A CHEMIST'S LITTLE JOKE.—In this town there is a well which has recently been under the tender care of the public analyst, and his edict refers the owners of the well for their future supply of Adam's wine to the tap which the borough has provided for them. Another chemist, who is also a pharmacist, has formed an opinion different from the public analyst's, and to give effect to it has secured the handle of the pump, and displays it over his shop door with the following notice suspended from it:—

"ONE MAN RULE.—Specimen of arbitrary despotism. Handle of a pump closed by the supposed caretakers of the people's health on the report of one man. No redress!! Information where pure water can be obtained is most earnestly solicited."

HARTLEPOOL.

NEW SALT-BEDS.—An official test of the Grenthan salt beds, near West Hartlepool, shows that there is a bed of salt nearly 100 feet thick, and it has been found that the brine contains 28 per cent. of sodium chloride. It is believed by experts that the whole of the land leased overlies a thick salt-bed, calculated to yield 280,000 tons of domestic or fishery salt per acre.

LIVERPOOL.

CONTRACTS.—At the fortnightly meeting of the vestry for the parish of Liverpool, which was held at the offices, Brownlow Hill, on Tuesday last, the following among other tenders were accepted: Drugs, Evans, Sons & Co.; druggists' sundries, Ayrton & Saunders; drysaltery, F. Wilkinson & Co.; india-rubber appliances, the Indiarubber and Guttapercha Company; mineral waters, W. Boote; salt, R. A. & J. C. Sharp; surgical appliances, J. Reynolds. The term of the contracts is from September 26, 1887, to March 25, 1888, inclusive.

LIVERPOOL CHEMISTS' ASSOCIATION.—A special general meeting of the above association was held on the evening of the 15th inst., at the Royal Institution, Colquitt Street, the president, Mr. A. C. Abraham, F.C.S., in the chair. The principal business was the consideration of new rules, which on the motion of the President, were adopted. It wa decided to admit to the society the members of the Liverpool Registered Chemists' Trade Association.

Oxalic Acid was used by a Liverpool publican, named Robert Hunter, with the object of committing suicide last Saturday, but the desired result was not attained.

Dr. Campbell Brown has been appointed public analyst for Bootle, at a retaining fee of 20 guineas a year and 10*s.* 6*d.* for each article analysed.

A Truss and a Vote.—At the Preston Revision Court last week it was decided that a man is not pauperised, and consequently not disfranchised, by being supplied with a truss at the expense of the union.

SCOTLAND.

Dental Students and Quacks.—The dental students of Glasgow have drawn up a petition appealing to the West of Scotland branch of the British Dental Association for protection against men in Glasgow who, without right or title, are practising dentistry, to the detriment of those who are qualified and others who are trying to be so.

A Fatal Draught.—Patrick Kelly, a labourer, residing in Dumbarton, was employed one day last week to assist in removing empty bottles from a house at Kirtonhill. He got a bottle with a quantity of liquor in it, and thinking it was brandy, hid it from his companions, and on the sly drank several ounces of its contents. He soon found his mistake. Medical aid was in vain, and he lingered on for two days, when he died in great agony. The liquor was an acid used by painters.

Methylated Spirit.—The sale of this spirit was the subject of discussion at a recent meeting of the St. Cuthbert's Parochial Board in Edinburgh. Mr. MacAllum, V.S., chemist and druggist, Grassmarket, and Dr. Hamilton Wylie, who are members of the Board, explained how druggists endeavour to limit the sale of the spirit to proper uses, but the members who know less about the matter were sceptical, and spoke a lot of nonsense regarding it.

SUNDERLAND.

A Doctor on Patent Medicines.—At an inquest held in Sunderland last week, on the body of a girl (13), who had died suddenly, Dr. Abrath stated that death had been caused by the rupture of a blood-vessel, arising from natural causes. The symptoms had no doubt been accelerated by patent pills which her mother stated she had been in the habit of taking for headache. He expressed the opinion that more people were killed annually in this country by patent medicines, especially by patent pills, than by anything else.

A Juryman: Now, doctor! (Laughter.)

Dr. Abrath: The sale of this class of pills is prohibited in some countries on the Continent, and the sooner their sale is stopped here the better it would for the people.

The Coroner: That is a matter of opinion. I have been ordered by a doctor to take patent medicines myself. It is a very wide question.

FRENCH PHARMACEUTICAL NEWS.

(*From our Paris Correspondent.*)

Professor Jullien Godfrin, who occupies the chair of materia medica at the Nancy College of Pharmacy, has been appointed a pharmacist major of the first class in the Territorial army.

Another Door Closed against Salicylic Acid.—The French papers announce that the Uruguay Government have prohibited, from September 11, the importation of all alimentary products and pharmaceutical preparations containing salicylic acid.

Pharmacist Principal Schmitt, director of the Pharmacie Centrale des Hôpitaux, in Paris, has been promoted to the grade of pharmacist inspector of the military pharmacists of the new section, and appointed a member of Consultative Committee of Health.

Boussingault's Successor.—The Academy of Sciences have presented to the Minister two names from which to choose a successor to Boussingault in the chair of agricultural chemistry at the Arts-et-Métiers. They are: (1) M. Schlœsing, (2) M. Müntz. According to custom the first-named chemist will get the appointment.

Lourdes Water Lozenges.—A new semi-pharmaceutical specialty is now advertised in some religious journals. According to a prospectus, unctuously worded, the lozenges contain nothing but pure sugar worked with Lourdes water, and the public are led to infer that the medicine will possess all the wonderful properties of the miraculous spring at Lourdes.

Hospital Physicians and Pharmacists.—According to official statistics just published, the 37 hospitals and asylums of Paris occupy at the present time 99 physicians, 37 surgeons, 10 accoucheurs, 22 pharmacists, 198 interne physicians, 120 interne pharmacists, and 22 midwives. The total number of beds is set down at 23,838, not including the sleeping accommodation of employés.

The Dreadful Botryocephalus. — While Parisians were enjoying the prospect of a supply of pure water at an expense representing barely the cost of a railway several hundred miles long, Dr. Fontaine-Atgier, of Fontainebleau, now comes forward to remind us that the water of the Lake Leman is so infested with eggs of the botryocephalus that the natives get their water-supply at some expense from mountain springs, and carefully avoid drinking the lake water. The helminth, it seems, is harboured by a fish called "Ferra," and readily finds a home in human intestines. Good water, then, must be sought for elsewhere. Those medical men spoil everything!

A Temperance Legend Spoiled.—On September 15 the Brewing Exhibition was opened with due ceremonies by Minister Barbe, who marched in arm-in-arm with M. Chevreul. As they were inspecting the still unfinished exposition they were offered beer, which they accepted and drank with apparent satisfaction. The centenarian chemist, it seems, dislikes wine and liquors, but rather enjoys a glass of beer. So he is not a teetotaler, as represented by some, but an exceedingly moderate drinker. He was present at the opening ceremony as a chemist, having "some fifty or sixty years ago," he said, studied the nature of yeast and ferments, and led the way to Pasteur's more important discoveries in the same field.

The Toulouse School of Medicine and Pharmacy.—Not satisfied with the glory of having been the headquarters of the late mobilisation, the old city of the troubadours is aiming at scientific laurels. Its municipal council having undertaken to bear the supplementary expenses, the Toulouse preparatory school of medicine and pharmacy has been transformed into a full-fledged school of *plein exercice*, according to legal phraseology. A decree to this effect was issued on September 18, the transformation to take place in November next. The chief difference is that in schools of this higher class, ranking next to faculties of medicine and superior schools of pharmacy, a more complete scientific education is supplied, and the professors are more numerous and receive a higher remuneration than in the preparatory schools.

Alcohol Legislation.—In accordance with a report presented by Premier Rouvier, based upon Senator Claude's elaborate investigation on the subject, President Grévy, on September 19, issued a decree ordering that a commission be adjoined to the Ministry of Finances, with a view to consider what reforms it is proper to introduce into the legislation respecting alcohol and all beverages in general. At the same time some thirty-seven gentlemen are appointed to compose the commission. Not to speak of the financiers, deputies, and senators so chosen, with the exception of Senator Claude, who was the chairman of the Senatorial Committee, the following may be noticed:—Professor Alglave, whose lecture on "Alcoholism" last winter, at the Sorbonne, will probably be remembered; Dr. Brouardel, of the Faculty of Medicine; M. Aimé Girard, of the municipal laboratory; M. De Luynes, the chemist to the department of Customs; and last, but not least, Deputy Wilson, President Grévy's son-in-law.

PHARMACY IN AUSTRALIA.

(*From our own Correspondent.*)

THE FIGHT WITH THE CO-OPERATIVE STORES.

THE topic of most immediate interest to pharmacists here is the attack by the Pharmacy Board of Victoria on the last stronghold of co-operative pharmacy in Melbourne. I have already given you particulars of the successful prosecutions against the Equitable Co operative Society and the Federal Store. Both of these bodies have subsequently entirely discontinued the dispensing of medicines and the sale of poisons. Indeed, a short while ago the Equitable Co-operative Society, being in the throes of a sensational sale, ventured to advertise Fellows's Syrup at a penny above the cost price. This drew from the Pharmacy Board the following letter, which seems to have stopped the little sortie:—

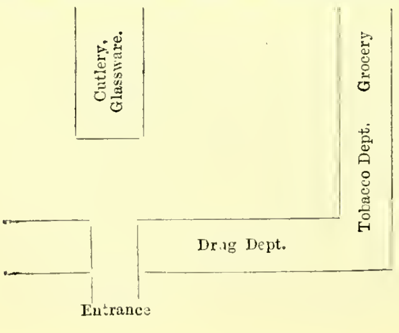
"Pharmacy Board of Victoria,
"Melbourne, July 8, 1887.

"SIR,—By direction, I am instructed to point out to you that you are now selling at the Equitable Co-operative Society's Store, Collins Street East, Melbourne, certain articles in violation of the 'Sale and Use of Poisons Act, 1876,' and I am to state that, unless this portion of the business of the store is at once closed, legal proceedings will be taken against you.

"I have the honour to be, sir, your obedient servant,
"HARRY SHILLINGLAW, Registrar.
"The Secretary of the Equitable Co-operative Society,
"Collins Street East, Melbourne."

The Mutual Store (Limited), which is the last to be attacked, was the first to be established. It was registered in 1872, and does a very large business at a profit of about 10 per cent. to the shareholders. It professes to deal only with its own members, and it was evidently felt that this was likely to prove a difficulty in enforcing the law, or it would have been made the subject of the first instead of the last attack. Had it been defeated in a suit on this point it is nearly certain that the other co-operative societies would have submitted without resistance, though the converse was by no means probable.

On July 30 the adjourned case of Harry William Shillinglaw *v.* The Mutual Store was heard before the magistrates of the Melbourne District Court. The store was charged with two offences: (1) of carrying on the business of a chemist and druggist, not being a duly registered pharmaceutical chemist, (2) of pretending to be a chemist and druggist. First-class lawyers were engaged on each side. A very full report of the case has been published in the August issue of your associate, *The Chemist and Druggist of Australasia*, from which I condense the following account:—As soon as the Amended Pharmacy Act was passed, making the word "person" include a corporation or company, the Pharmacy Board drew the attention of the Mutual Store to the alteration in the law. On December 17, 1886, after the defeat of the Equitable Co-operative Society on appeal, the attention of the store was drawn to the decision of the Supreme Court, and its directors were asked to say if they would comply with the law. On July 11 two clerks went at different times to the store. One of them described the arrangement of the store, which is roughly indicated in the diagram. There was a notice-board stating that the store was divided into several departments, one of them being the drug department. There were glass signs, reading thus: "Dispensing chemist," "Prescriptions carefully dispensed; all kinds of drugs, perfumery, &c.," "A. Horton Crundall, pharmaceutical chemist." He could see no division between the drug department and other departments. He handed in an order for a bottle of chlorodyne, 4 lbs. of linseed meal, a small bottle of castor-oil, a box of nightlights, and a prescription as follows:—



5335
Mrs. Phillips' son. 28/4/87.
Liq. opii sed.
Pulv. aromat.
Spt. ammon. arom.
Aq. cinnam.
A teaspoonful every two hours till relieved.

The clerk was not a member of the store, but there is a Mrs. Phillips who is. A sovereign was tendered for the goods, and change, 14*s.* 4*d.*, was brought from the cash department of the store. This is a rather important point. The medicine was labelled with the directions as given above, the number and name, and then "A. Horton Crundall, pharmaceutical chemist, 15 Flinders Street, Melbourne." The receipt for the money was headed "The Mutual Store (Limited), Flinders Street East. Mrs. Phillips, bought of A. Horton Crundall, pharmaceutical chemist," and then the particulars and the initials, "A. H. C." It will be seen that a casual glance would indicate that A. Horton Crundall was carrying on the business, and it looked as if the defence would be that it was not the store but a duly-qualified chemist who was carrying on the business. The second clerk ordered vaseline, tricopherous, pure carbolic acid and liniment, and also a prescription as follows:—

Mrs. Glenny's child.
Lin. belladon.
Lin. opii cum sap.

It was stamped "A. Horton Crundall, 12/2/87," showing that it had been previously dispensed at the store. Mrs. Glenny was a member and a regular customer. The acid supplied was labelled "Carbolic acid. A. Horton Crundall, pharmaceutical chemist, 15 Flinders Street East, Melbourne. Poison." This witness confirmed the evidence previously given.

Mr. A. Horton Crundall, the chemist of the store, was then called and gave very important evidence:—He had been dispensing chemist for the store for two years. He carried on the business, not the store. He bought the medicines, the store paid for them; acted as a merchant's buyer; he bought them for the store and sold them for the store; got a salary from the store; shared the profits and the losses as a shareholder, but not in any other way; the store paid by its own cheque for the medicines, and the wholesale houses, Rocke, Tompsitt & Co., and Ford & Co, made out their account in his name, but for the store; in reality it was the Mutual Store; the Mutual Store paid for the labels bearing his name; the label was made up by him, but he supposed it was only a blind; always inquired of customers if he doubted whether they were shareholders, but if very busy he might not think of it; the chemist's department was simply a department of the store. After the letter of December 1886 was sent from the Pharmaceutical Board he received certain instructions. [Directors' minute book produced and read: "That in future Mr. Crundall dispense medicines and sell drugs to members only. December 24, 1886."] Had endeavoured to follow out these instructions. Had dispensed the two prescriptions referred to believing them to be for members. Did not willingly sell to persons not members, though he did so sometimes by inadvertence or press of business. The Mutual Store would allow any person, on payment of half-a-crown, to be registered and to purchase at the store, but such ticket-holders were not entitled to medicines. He would not serve persons that were only ticket-holders if his attention was called to it, though he did so undoubtedly by inadvertence.

On this evidence it was clear that no attempt would be made to defend the case on the ground that the store was not carrying on the business, and the address of the counsel for the defence showed at once that the plea relied on was that the store had full right to dispense for its own members. The Mutual Store was a corporation properly registered, and it had been laid down in decided cases that such a company could not be made liable for illegal acts of its directors or servants unless they came within the articles of association. The store was established for the advantageous purchase of goods and commodities of various kinds ordinarily used in the household, and their equitable and convenient distribution. No one could prevent half a dozen persons buying a wholesale parcel of drugs and dividing it among themselves; why, then, should a larger number be stopped? The dispenser in making up medicines for persons who were not members was disobeying orders, and was in the position of a coachman who bought a bottle of grog and dispensed it at 6*d.* a glass in the stable-yard. The master would not be liable for the offence, but the coachman would. On the other hand, if the coachman, while he was driving the coach, damaged another person's property, the master would then be liable, as the coachman was doing what he was engaged for. Mr. Crundall, however, could not be prosecuted for dispensing medicines, as he was qualified to do this anywhere.

The Bench nevertheless inflicted a fine of 10*s.* and 5*l.* 5*s.* costs on the first charge, of acting as a chemist, and 5*s.* and 3*l.* 3*s.* costs on the second charge, of pretending to be a chemist. On the application of the counsel for the defence they agreed to state a case on each point in the event of an appeal being carried to a higher court.

So far this case is very satisfactory. If the magisterial decision is upheld, that persons may not associate for the purpose of buying drugs and dividing them among themselves, then it will be possible to attack another form of competition very rife in Victoria and extending to other colonies. Friendly societies' dispensaries are springing up everywhere. A number of friendly societies combine and find the capital for fitting up a dispensary, in which they put a qualified chemist, and dispense medicines for their members at very low rate. They also deal in various drugs, and are not particular in confining their dealings to members only. These dispensaries have long existed in Victoria, Tasmania, and Queensland, and have been recently started in New South Wales and New Zealand.

THE PHARMACEUTICAL SOCIETIES

have not had a very sensational month. The Pharmaceutical Society of New South Wales has re-elected Mr. Harry W. Sadler as its president. Mr. Sadler took the reins on the resignation of Mr. Larmer, and had thus not held them for his full twelvemonths. He has had a delicate position to fill, as there have been serious differences of opinion on the council; but he has established his reputation for fairness. Mr. Bozon has been re-elected treasurer.

In New Zealand the pharmacists of the Auckland district have during the month formed a society under the title of "The Chemists and Druggists' Association of Auckland." Mr. J. A. Pond, the Government analyst, Auckland delegate to the Inter-colonial Conference, and member of the Pharmacy Board and examiner in chemistry, has been elected chairman, Mr. Edson treasurer, Mr. J. Kenderdine secretary, the other members of the committee being Messrs. Aickin and Crawford. Meetings will be held quarterly for the discussion of matters connected with the trade; a reference library will also be formed. The Pharmacy Board of New Zealand has still in hand a Bill for amending the Pharmacy Act. The Pharmaceutical Society of Queensland holds its annual meeting a fortnight hence, and will doubtless start on its career with renewed vigour. It has under discussion a Sale and Use of Poisons Act. It is the only Australasian colony still without laws for regulating the sale and use of poisons. The proposed Bill is based on the Tasmanian Act passed in December, 1886. The regulations as to registering poisons resemble those of Britain, but the vendor is required to sign each entry. Poisons in the first part of the schedule are not to be sold to persons under the age of eighteen, or unknown to the vendor. Vermin-killers must be sold only to householders. A new provision is introduced into the exemptions. Sales by wholesale dealers are exempted in all other Acts I am acquainted with, but in this it is proposed to limit this exemption to sales by wholesale *to legally qualified medical men or pharmaceutical chemists*, and patent medicines are not exempted at all. The poison schedule contains in the first part in addition to what are in the English schedule :—

Chloral hydrate and its preparations.
Tartar emetic and its preparations.
Corrosive sublimate and its preparations.
Cantharides and preparations containing same.
All poisonous vegetable alkaloids and their salts.
Aconite and preparations containing same.
Atropine and preparations containing same, as well as preparations of the other poisons in this part.

The second part contains :—

Nitric acid or aquafortis.
Sulphuric acid or oil of vitriol.
Phosphorus.
Carbolic acid.
Hydrochloric acid or spirits of salts and oxalates, in addition to those in the English schedule, part 2.

The Tasmanian Act requires poisons to be labelled with their antidotes, but this provision was dropped in the Queensland Bill.

The Pharmaceutical Society of South Australia has nearly completed the discussion of its Pharmacy Bill, and has added the following articles to the second part of the poison schedule :—

Sulphuric acid.
Oxalic acid.
Nitric acid.
Muriatic acid.
Carbolic acid.
Aqua regia.
Nitrate of silver.
Sulphate of copper.
Mercury and preparations.
Sugar of lead.
Goulard's extract.
Litharge.
Phosphorus.
Sulphate of zinc.
Nitrite of amyl.
Butyr of antimony.
Indian hemp.
Tincture of Gelsemium.
Hellebore and preparations.
Lobelia and preparations.
Salt of Lemons.
Stavesacre and preparations.
Yellow prussiate of potash.
Red prussiate of potash.

INTERCHANGE OF PHARMACEUTICAL DIPLOMAS WITH GREAT BRITAIN.

In my last letter I urged that the Pharmaceutical Society of Great Britain should take powers in any amending Pharmacy Bill to recognise and accept the certificates of any colonial examining body which might prove that its pharmaceutical diplomas were satisfactory evidence of proficiency. We are not particular as to the method, but we are not inclined to rest quietly under the *non possumus* of the Society. If the Society cannot, then let its disability be removed. I reiterate that by taking this power the Society does not throw itself open to an invasion of colonial pharmacists. (May I whisper my belief that not many colonial chemists will feel drawn towards English soil for the purpose of making a living?) It still has the power to investigate and accept or reject; but it will have to take each case on its merits. The principle of the registration of colonial diplomas has already been recognised in the Imperial Medical Act, and the fact that the General Medical Council has the power to refuse to accept diplomas granted by any university or other body whose syllabus does not reach its standard has had a very stimulating effect on the university councils out here. I repeat again, I am not clamouring for immediate recognition and registration of all colonial chemists. We are in much the same condition here as you are in England; some 70 per cent. of the registered chemists were in business before the passing of the Pharmacy Act, and have gone through no examination. But in the interests of colonial pharmacy and of Imperial good-fellowship we ask that some plan may be devised which shall make reciprocity possible.

DR. WILLIAM MILLIGAN, of South Tottenham, reports a case of poisoning with less than half an ounce of nitric acid, which is an unusually small quantity to be followed by fatal results.

THE CAPACITY OF CARBOYS is the subject of a letter in a contemporary, raising a point of some interest concerning the measurement of carboys of so-called "tower salts," or crude hydrochloric acid. This article is usually bought per carboy, supposed to contain 10 gallons of acid; but a purchaser, having his suspicions aroused, recently decided to calculate the capacity of each carboy delivered to him, and found that of fifteen packages tested eleven were a good deal below, and only two slightly above, the average, while one measured exactly 10 gallons. The average of the fifteen was 9 3 gallons per carboy.

The British Association.

SCIENCE scored a big success in the Manchester meeting of the British Association. A total of 3,833 tickets was sold, which indicated an attendance of more than 500 beyond that of any previous meeting. The proportion of ladies attending was a marked feature. It was estimated that of the 3,833 not less than 1,300 were gentle scientists. There were 92 foreigners. The amount received was 4,294*l.*, which, also of course, was largely in excess of any previous receipts at one meeting. This success was achieved in spite of the circumstance that the weather did its utmost to spoil the meeting, and to maintain the meteorological reputation of Manchester.

The President's Address.

Sir **Henry Roscoe**, whose local and general popularity contributed largely to the success of the meeting, took little pains to justify that popularity by an address attractive or even intelligible to the crowd. He aimed to present a sketch of the progress of scientific chemistry during the past fifty years, and in making choice of the abundance of materials which lay before him he scorned the aid of dramatic contrasts, but plodded on with a perfectly wonderful mastery of detail through all the most abstruse and technical studies of the greatest chemical workers and thinkers of the past half-century. Reminding his audience that they were within a stone's throw of the small room which served Dalton as his laboratory, and where with the simplest of all possible apparatus—a few cups, penny ink-bottles, rough balances, and self-made thermometers and barometers—he accomplished his great results. Sir H. Roscoe added a glowing tribute to the work accomplished by another and still living Manchester philosopher, James Prescott Joule. In his house, the President says, he would gladly serve as doorkeeper. To him science owes a debt of gratitude not less than that which it willingly pays to the memory of the originator of the atomic theory. His determination of the mechanical equivalent of heat, completed about the year 1842, gave to the world of science beyond reach of doubt or cavil the greatest and most far-reaching scientific principle of modern times—namely, that of the conservation of energy. This, to use the words of Tyndall, is indeed a generalisation of conspicuous grandeur, fit to take rank with the principle of gravitation, more momentous, if that be possible, combining as it does the energies of the material universe into an organic whole, and enabling the eye of science to follow the flying shuttles of the universal power as it weaves what the Erdgeist in *Faust* calls "the living garment of God."

Lavoisier, said Sir H. Roscoe, in a later portion of his address, "left untouched the dynamics of combustion. He could not explain why a fixed and unalterable amount of heat is in most cases emitted, but in some cases absorbed, when chemical combination takes place. What Lavoisier left unexplained Joule has made clear. On August 25, 1843, Joule read a short communication before the Chemical Section of our Association, meeting that year at Cork, containing an announcement of a discovery which was to revolutionise modern science. This consisted in the determination of the mechanical equivalent of heat, in proving by accurate experiment that by the expenditure of energy equal to that developed by the weight of 772 lbs. falling through 1 foot at Manchester, the temperature of 1 lb. of water can be raised 1° Fahrenheit. In other words, every change in the arrangement of the particles is accompanied by a definite evolution or an absorption of heat. In all such cases the molecular energy leaves the potential to assume the kinetic form, or *vice versâ*. Heat is evolved by the clashing of the atoms, and this amount is fixed and definite. Thus it is to Joule we owe the foundation of chemical dynamics and the basis of thermal chemistry. As the conservation of mass or the principle of the indestructibility of matter forms the basis of chemical statics, so the principle of the conservation of energy constitutes the foundation of chemical dynamics. Change in the form of matter and change in the form of energy are the universal accompaniments of every chemical operation."

Besides sketching briefly, and apparently not very sympathetically, the theories of chemistry, Sir H. Roscoe entered at some length into the progress which had been made in the synthesis of organic compounds. Wöhler produced them artificially in 1828, and that discovery broke down for ever the barrier of essential chemical difference between the products of the inanimate and of the animate world. But the progress of synthetic organic chemistry, which has of late been so rapid, was made in the early days of the half-century only by feeble steps and slow. Seventeen long years elapsed between Wöhler's discovery and the next real synthesis. This was accomplished by Kolbe, who in 1845 prepared acetic acid from its elements. But then a splendid harvest of results gathered in by chemists of all nations quickly followed, a harvest so rich and varied that we are apt to be overpowered by its wealth. This progress has been facilitated by the discovery of the possibility of groups of atoms acting like elements, and by the establishment of the substitution theory. The discoveries of aniline, of artificial indigo, of saccharin, and of a series of valuable febrifuges were instanced. These suggest the possibility of preparing a compound which will possess certain desired physiological properties, or even to foretell the kind of action which such bodies may exert on the animal economy. In reply to the question whether any limit is to be set to the synthetic power of the chemist, Sir H. Roscoe, while recognising the danger of dogmatising, says: "One cannot help feeling that the barrier which exists between the organised and unorganised worlds is one which the chemist at present sees no chance of breaking down. It is true that there are those who profess to foresee that the day will arrive when the chemist, by a succession of constructive efforts, may pass beyond albumen, and gather the elements of lifeless matter into a living structure. Whatever may be said regarding this from other stand-points, the chemist can only say that at present no such problem lies within his province. Protoplasm, with which the simplest manifestations of life are associated, is not a compound, but a structure built up of compounds. The chemist may successfully synthesise any of its component molecules, but he has no more reason to look forward to the synthetic production of the structure than to imagine that the synthesis of gallic acid leads to the artificial production of gall-nuts."

Chemical Papers.

Dr. **Edward Schunck**, F.R.S., the president of the chemical section, in his opening address followed Sir H. Roscoe's lead in contrasting modern chemistry with that of fifty years ago. The main distinction, he asserted, of the present day consisted in this, that, whereas formerly science dealt chiefly with qualitative reactions, it now occupied itself principally with quantitative determinations. To have established the fact that every chemical phenomenon might be represented in figures, denoting either number, measure, or weight, such figures when once accurately determined remaining constant and unchanged through all time—this seemed to him the crowning glory of modern chemistry. As regarded the future of chemistry, the question frequently suggested itself—Will chemical science go on expanding and developing during the next few generations as it has done in the last hundred years? Will discovery follow discovery, and fact be added to fact, until the record occupies not a few volumes only, but a whole library? Will systematic chemistry—*i e.* the history and description of all possible combinations of the elements—have any limits? He was inclined to answer in the negative. All human institutions culminated and decayed, and he did not see why the science of chemistry should form an exception. Moreover, it was a natural law that whatever developed rapidly also declined rapidly, and the development of systematic chemistry since the commencement of this century had been perfectly unprecedented. He thought it probable that in the course of time, at the rate at which they were progressing, nearly all possible compounds would have been prepared, all the most important chemical facts would have been discovered, and pure chemistry would be practically exhausted, and in the same condition as systematic botany and mineralogy now were. New compounds would now and then be discovered, just as new plants and new minerals now were, but nothing further would be brought to light that would affect the theories at which we should then have arrived, whatever they might be. But even then the science would continue to develop, especially in regard to the processes whereby the substances constituting the organs of plants were formed. As an illustration of this kind of investigation, Dr. Schunck threw out a new theory of the composition of chlorophyll. Everyone who had paid any attention to the subject knew that ordinary chlorophyll consisted of several colouring matters, some of which were yellow, not to mention fatty matters, which were unessential. But he argued that the pure green substance, the chlorophyll *par excellence*, did not belong to the same class of bodies as alizarin or indigo, but contained three elements, each essential to its constitution—one being a basic nitrogenous colouring matter, the second a metal or a metallic oxide, the third an acid—the three together constituting green chlorophyll. The basic colouring matter was the phyllocyanin of Fremy; the metal might be iron or zinc; the acid he would suppose to be carbonic acid. Now the plant having formed its colouring matter, the metallic oxide being present in some form or other, and the carbonic acid being supplied by the atmosphere, all the necessary conditions co-existed for the formation of chlorophyll. The compound was an unstable one; it easily parted with its carbonic acid, giving it up to the protoplasm or whatever the agent might be that effected its actual decomposition under the influence of light. The advantage of this arrangement consisted in this, that the carbonic acid would be presented in a more condensed state to the agent which effected its decomposition than if it were merely contained in a watery solution, but more closely combined, and therefore more easily accessible than if it were united to a strong base such as potash or lime. The carbonic acid having been disposed of, the other two constituents would be in a state to take up fresh quantities of carbonic acid, and so on. Chlorophyll would, therefore, act as a carrier of carbonic acid in the plant, just as hæmoglobin served to convey oxygen in the animal economy. Whether this be a true theory or not it served to show that the first steps of the process whereby organic or organised matter was formed in plants were hardly understood. They understood still less the further steps leading to the production of the more complex vegetable bodies—acids, alkaloids, fatty matters.

Sir J. LAWES and Dr. GILBERT expounded the present aspect of the question of the sources of nitrogen of vegetation. The authors quoted the opinions of a number of writers on the question of the cultivation of the soil, and said that at present they had extremely conflicting results as to whether free nitrogen came into play in any way. The results quantitatively were most discrepant, and the explanations were almost as numerous as the observers. Still there were many results which could only be explained in one of two ways; either error was at work or free nitrogen had been brought into operation. They thought, however, that they must hold their opinions in abeyance for the present. They detailed experiments which had been made in the raising of various crops, and said it was shown that in these nitrogen was derived from the residue of crops previously taken from the soil. There was clear evidence of nitrification of the subsoil in certain cases. The evidence was at present inadequate to justify a definite conclusion.

Dr. BOTT (London) explained a new method of testing alcoholic liquors, discovered by Professor Schwartz. He said the method was as rapid and simple as other methods, and required no special chemical knowledge on the part of the operator. The operation could be performed in two or three minutes. It consisted, first, in the determination of the specific gravity of the liquid under examination; and, secondly, in the determination of the index of refraction. The first was done by a hydrometer, and the second by a refractometer, manufactured by a German firm. With the refractometer they could determine the difference between the specific gravity of the liquor they were testing and that of pure water, and the differences between the respective indices of refraction. The only objection to the method was the expensiveness of the instrument for determining the index of refraction; but the saving of time in cases where large quantities had to be tested would amply repay the first cost.

Mr. CHARLES O'NEILL (Manchester), in a paper on "The Extent to which Calico Printing and the Tinctorial Arts have been Affected by the Introduction of Modern Colours," described the rapid use of the aniline dyes, and said that month after month chemists and colour manufacturers were patenting colours or new processes in such numbers that only specialists could pretend to follow or appreciate the work that was being done. None of the modern colours, except alizarine and its allied blue and orange derivatives, could be said to be fast colours upon cotton in the sense that madder or indigo were fast, but many of them were fast enough for the purposes to which they were applied, and had contributed in calico printing to give a variety in colourings which had no doubt extended the demand for printed goods. So far the employment of modern dyes had been a boon to the purchasers of prints. How far it had benefited the calico printers was another question.

In a paper on "The Present Position of the Alkali Manufacture," Mr. ALFRED E. FLETCHER (Chief Inspector under the Alkali Works Regulation Act) said this year was the centenary of the Leblanc process. Leblanc's process had withstood the attacks of all rivals, and although now its supremacy was more fiercely attacked than at any previous period, he thought its foundations were still secure, and that it would maintain its position for many a year to come. During the last ten years slight alterations had been proposed in the proportions to be used of the three ingredients forming the charge of the black ash furnace—the coal, brimstone, or chalk, and sulphate of soda—and in the method of throwing them in the furnace. The main process, however, of fusing those materials together and, when cold, lixiviating the mixture for the extraction of carbonate of soda is followed almost exactly as was proposed by Leblanc now just a century ago. The process as hitherto practised was seriously attacked by the ammonia process as far as the manufacture of carbonate of soda was concerned, and it would have been by this time completely driven out of the market by its rival but for the importance of its by-products. Bleaching powder had not as yet been made in connection with the ammonia process. Three methods were, however, proposed, and were on their trial for the attainment of that end. M. Solvay proposes to boil down the waste calcic chloride liquor of the ammonia process to dryness and furnace the residue with clay. Mr. Mond heats his residual ammonium chloride with oxide of nickel, distilling off ammonia with the formation of nickel chloride which is subsequently heated in a current of air with formation of chlorine. The third process is that of Mr. Pechiney, who obtains a residue of chloride of magnesium from which, on application of heat and steam, the chlorine is recovered. The result of this threefold attack on the principal remaining prop of the Leblanc process is watched with the greatest interest. If bleaching powder can be produced by either at moderate cost, the older alkali process is played out. As things now stand, a further fall in the price of soda ash would not harm the Leblanc manufacturers, since they can advance the price of bleaching powder in sufficient measure to recoup themselves. But if any manufacturer should develop a process whereby more bleaching powder can be made per ton of salt decomposed, he would have an immediate advantage. Should all adopt such a process things would re-establish themselves as at present as far as profit went, but the Leblanc makers would produce less ash, and those using the ammonia process would produce proportionately more. The real struggle would arise when bleaching powder was cheaply made in connection with the ammonia process.

"Saccharine" was the subject of a good deal of interest. Dr. Fahlberg, the discoverer, read a paper describing his experiments, and exhibited samples which were examined and generally approved. Dr. Fahlberg said the substance is now manufactured on a commercial scale in Germany. In reply to a question as to whether it was perfectly harmless, Professor Watson Smith said he could reply in the affirmative. Experiments had been made with it in Germany on a large scale in the case of dogs, and also upon human beings, and it was found to be quite harmless. Dr. Fahlberg said he had used it for nine years, and it had not had any injurious effects upon him.

Mr. WILLIAM THOMSON, F.R.S.E, contributed a paper on "The Antiseptic Properties of some Fluorine Compounds." He said that some time ago he was engaged in trying to find a substance which would act as a powerful antiseptic, &c., which was not volatile, and which was not destroyed by oxidation. He tried the effects on flour paste, and on meat chopped into small pieces and mixed with water, of a very large number of chemical compounds, and found that those which had the most remarkable antiseptic properties were the compounds of fluorides, hydro-fluoric acid, the acid and neutral fluorides of sodium, potassium, and ammonium, and the fluosilicates of those bases. Of these compounds he found sodium fluosilicate to be the one which for its powerful antiseptic and unobjectionable properties was the one which for the general purpose of an antiseptic was perhaps the best suited. This body was not poisonous, possessed no smell, and was sparingly soluble in water. It had only a very slightly saline taste, and might therefore be employed in preserving food without communicating any taste to it. Many experiments had been made with it for surgical purposes. A saturated solution which contained 0·61 per cent. of the salt was not irritating to wounds, while it possessed greater antiseptic power for animal tissues than one part of perchloride of mercury in 1,000 of water, which was a stronger solution than that which could be generally employed for surgical purposes without producing poisonous effects.

In reply to a number of questions, Mr. Thomson described the method of producing sodium fluosilicate from fluor spar. It was suggested that the antiseptic under consideration might be of great value in sewage irrigation provided it had no injurious effect on vegetation. Mr. Thomson said his own experiments showed that sodium fluosilicate did not destroy grass so rapidly as common salt. He had been told that the substance removed unpleasant smells from the hands, and a solution of it would therefore be useful for medical men after performing objectionable operations. Sodium fluosilicate could not be obtained in a concentrated solution. It dissolved slowly, but the small quantity thus obtained was a powerful antiseptic and deodoriser.

Mr. A. H. ALLEN (Sheffield) pointed out that plenty of fluor spar could be obtained from the caves at Castleton, Derbyshire. Mr. F. W. CLARKE said that the sources of cryolite could be used for the production of sodium fluosilicate. Mr. THOMSON observed that there was no reason to apprehend a sufficient quantity could not be obtained for all practical purposes.

ARE WE PROGRESSING?

One of the most attractive of the sectional addresses was that delivered by Mr. R. Giffen as president of the section on Economic Science and Statistics. He intimated that his purpose was to inquire whether there had been in recent years a change in the rate of material progress in the country as compared with the period just preceding. This involved a considerable discussion of statistics and the interpretation thereof. Between 1855 and 1865 income tax assessments increased at the rate of 28 per cent., between 1865 and 1875 at the rate of 44 per cent., and between 1875 and 1885 at the rate of 10 per cent. only. The increase in the production of coal in the same periods has been 53 per cent., 35 per cent., and 20 per cent. respectively. The production of pig-iron shows corresponding results. Agricultural produce has recently been not much better than stationary. The consumption of raw materials, the receipts of railways, the shipping in foreign trade, and the consumption of tea and sugar, all tell the same story—namely, that in the last ten years the rate of progress has been seriously checked. There has been an increase, but in much smaller proportion than in the twenty years before. Mr. Giffen discussed the various possible explanations of this check. Foreign tariffs he does not consider have been exceptionally injurious during the past decade; foreign bounties have only affected English trade in regard to sugar and shipping. With regard to the former, he points out that if we could do all our own sugar refining, and as much export trade as we ever did, the whole income from that source would not exceed about 2,000,000*l*. annually; and of that sum we must only reckon as loss the difference between what we should have gained and that which has been gained by the employment of the same labour and capital in other directions. Moreover, it must be remembered that the extreme cheapness of sugar has stimulated many other industries, and this must have compensated any loss incurred by the injury to the refining industry. Similar arguments apply to the shipping bounties. As to foreign manufactured goods imported into this country, Mr. Giffen shows that these have not increased in greater proportion since 1875 than before. One cause to which, however, Mr. Giffen attributes less importance now than he once did might be the reduction of the hours of labour, and the growth of a disposition to take things easier which had been the result of the general prosperity of the country. Another idea promulgated has been that we are losing our ascendency in the production of coal and iron. With regard to this, however, Dr. Giffen points out that with improved methods of communication we are not so dependent on such products as we once were. He remarked besides that there has almost always in English history been some one industry that was supposed to be king. It the middle ages it was the growth and export of raw wool; last century it was the woollen manufacture itself; early in this century and down to a very late date cotton was king; more lately, since the beginning of the railway and steamship era, it has been coal and iron. How do we know, how can we know, that the coal and iron are to reign indefinitely, any more than wool, or the woollen manufacture, or cotton themselves have done? Changes are always going on, and for that reason I believe we should attach the more importance to the increasing signs that it is no longer necessary or indispensable for prosperous communities to live where their food and raw materials are grown. After pointing out that the statistics of population and of pauperism do not support the view that there is less employment than there was for Englishmen, Mr. Giffen arrives at the conclusion that the reduction in incomes, &c., does not much more than represent the general fall in prices, and that if we are losing any part of our trade in great staples of industry the variety of miscellaneous means of gaining income is much more abundant, and the country is developing in new directions. If shorter hours of labour and taking things easy have contributed to check our rate of progress slightly, there is all the more reason for improving the human agent in industry so as to make work in the shorter hours more efficient. Looking at the stir there now is about technical education and such matters, and the hereditary character of our population, he sees no cause to doubt that the future will be even more prosperous than the past. The national life seems as fresh and vigorous as ever. The unrest and complaints of the last few years are not bad signs. But the new conditions must be fully recognised. The utmost energy, mobility and resource must be applied in every direction if we are to hold our own.

THE ARYAN RACE.

One of the sensations of the meeting was provided in the anthropological section, over which Professor Sayce, the eminent philologist, presided. In his address Professor Sayce formally abandoned the theory of the Central Asian or Northern Indian origin of the various European nations; and it now appears that this great discovery of the philologists had no adequate foundation. The picture which Max Müller has drawn of the peaceful Aryan nation, feeding their flocks, tilling their lands, and talking Sanscrit, and at intervals pushing forward their tribes in different streams, and ultimately peopling Europe, is, it appears, all a myth, and never rested on any solid foundation. Mr. Sayce believes the original Aryans were fair-haired, blue-eyed, tall, strong savages, who inhabited some part of southern Scandinavia. In this he adopts theories which have been put forward by several German and Austrian philologists, particularly by Penka and Schrader. Canon Isaac Taylor, who read a paper in the section, believes the origin of the Aryan races and languages can be traced to the Finns, and gives linguistic evidence in support of that view. All this is rather hard on the confiding public, who had supposed that the Asiatic origin of our race had been proved as the philologists professed. It will be a long time before their conclusions are implicitly accepted again.

TRADE WITH THE SOUDAN.

Major WATSON, late Governor of the Red Sea Littoral, contributed a paper on "The Prospects of Trade in the Soudan." He described the Soudan as a country of vast extent, of considerable fertility, and with a population of millions, reduced to a miserable condition by the wars of the last four years. The people there were sick of war, and would be delighted that trade should reopen and that they should have a government. The Soudanese are not all savages. They are fine, intelligent men, and very easy to deal with. Perhaps the best way to open the trade with the Soudanese would be for a company to be formed to take charge of the coast on behalf of the Egyptian Government, which would hand over the customs and duties to the company. It would be easy for the agents of the company to get into communication with the tribes along the coast, and if small posts were established at the different harbours trade would soon open.

In another paper on the "Red Sea Trade," Mr. A. B. WYLDE pointed out the advantages of the Suakin-Berber route to the Soudan, and said that to open up the country steamers and machinery were required. These could not be carried across the desert without a railway. At present, however, he did not advocate a railway scheme. The first thing was to get back trade, and when camels were unable to cope with it a railway would follow as a matter of course.

Sir CHARLES WILSON said the great geographical feature of the Soudan was that between the Nile and sea they had the enormous block of the Abyssinian mountains. No trade could get out from the Soudan over the great Abyssinian tableland. The whole trade of that portion of Central Africa must come out in the vicinity of Suakin. If one-tenth of the money which had been spent on the Nile route had been spent in improving the communication between the Soudan and Suakin there never would have been any revolt in the Soudan, and Egypt would have made a deal more money out of the country. As the English Government would not take it up, the best way to work the trade of the Soudan would be for a company to be started to take over that portion of the coast. He thought that trade would spring up and would yield good returns, and that there would not be those difficulties which some people supposed.

THE METRIC SYSTEM

was advocated in the Geographical Section by Mr. RAVENSTEIN, who urged that though the English foot is used by 471 millions of people, and the metre by only 347 millions of people, the former is gaining no new adherents, while the latter is pursuing a steady career of conquest.

BAD SEEDS.

Professor FREAM, in a conference on the condition of agriculture, stated as one of the remediable difficulties of farmers the use of bad seed. No greater folly could be conceived than that of introducing upon the land by means of purchased seeds the seeds of weeds and parasites. There is no official seed control in this country. Farmers have not been educated critically to examine seeds themselves, and they grudge the few shillings that would enable them to secure a trustworthy report. The most objectionable rubbish is sometimes sown, and heavy expenses are in consequence subsequently incurred. Related to this subject is the encouragement of weeds. Such weeds as charlock, red poppy, dock, spurrey, black bent or hungerweed are grown at immense cost to the farmer. His object is, or should be, to concentrate all the capacities of the soil upon the production of useful crops. Every weed grown detracts from this purpose. Some—the cruciferous weeds, for example—harbour and encourage insect pests.

ELECTRIC LIGHTING.

In a public lecture on this subject Mr. GEORGE said that the mistrust engendered five years ago by disastrous speculation and impossible schemes was now wholly unwarranted, and the common-sense of the country must be reawakened if this nation was to take any lead in the future application of electricity to industry and the arts. He then explained in some detail how light was created by electricity, and spoke of the various lamps in use. The arc, he said, was the best for large spaces, and the incandescent for small buildings and houses. Having referred to the various methods of distribution that had been found unsatisfactory, he said that the only one that had been a success was the system of using an alternating current of high pressure in the mains and converting it by a specially-designed apparatus into a low pressure at the lamps. This system was founded on Faraday's discovery of induction, and it was being largely used in America and Europe. The lecturer showed a meter by means of which the amount of electricity consumed by each customer could be measured. In conclusion, he said the progress of central-station electric lighting in this country had been extremely slow, owing largely to the Electric Lighting Act of 1882. If electricity be put on the same terms as gas, and if you have your station on a river-bank or any place where coal and water are cheap, you can be well supplied with electric-light at the same price as gas, at 3*s.* for 1,000 feet, with a fair profit to the promoters. On the Continent there are numerous central stations. In America there are 250 in different towns, and the progress has been enormous. Most of the best companies concerned pay good dividends. The total money invested in electric lighting in the United States is estimated this year to amount to 30,000,000*l.* In 1886 there were 58 Edison central stations alone, supplying 129,900 lamps, besides 181,463 lamps in isolated plants. The Westinghouse Company have during this year been setting up central stations at the rate of 12,000 lamps a month. It is estimated that in 1885 the Brush Company alone had 96,000 arc lamps in use in the States. The number had doubled each year from 1881. At present there are probably more than 300,000 arc lamps in use in that country. The Americans are also getting the start of us in electric railways and tramways, and generally in the application of electricity to motive power. We once beat the whole world in steam railways. Our pre-eminence in steam has gone far to make this country what it is. So let it be with electricity, for we are now passing into the age of electricity.

SCIENTIFIC WIT

is generally of a somewhat heavy character, and in the form of the "Red Lions' Dinner," which is held every year, it is particularly lugubrious and quite threadbare. Sir Robert Ball, the Astronomer Royal for Ireland, was the lion king of the occasion. The usual toasts were proposed: "The Royal Queen Lioness," "Lions from Foreign Dens," to which Professors Morse and Lothen Mayer growled responses. One of the jokes of the evening was a mock telegram from Stanley in Central Africa—"Met Emin. Succeeded in relieving him. Cold missionary had given out. We are starving. Send Sir Fred. Bramwell." It must have taken a committee to work up such a 20-horse power joke as that.

Probably under this heading should be classed the "Dynamical Parable" which served as the presidential address of Sir Robert S. Ball to the Mathematical Section. It dealt with the theory of screws, Mr. Anharmonic, Mr. Commonsense, Mr. Querulous, Mr. Helix, and others taking part in the dialogue and action reported. Sir Henry Roscoe, who heard the address, and moved a vote of thanks for it, declared that he appreciated its wit; but the majority of those who read it doubt very much whether Sir Robert Ball will ever displace John Bunyan.

THE GRANTS FOR SCIENTIFIC PURPOSES

for the ensuing year voted by the General Committee amounted to 1,975*l.* Among these were the following, voted for the chemistry section:—The influence of silent discharge of electricity on gases, 10*l.*; properties of solutions, 25*l.*; recording water analysis results, 10*l.*; influence of silicon on steel, 20*l.*; methods for teaching chemistry, 10*l*; isomeric naphthalene derivatives, 25*l.*; action of light on hydracids, 20*l.*

THE NEXT MEETING

of the Association is to be held at Bath, commencing on September 5, under the presidency of Sir Frederick Bramwell, and Newcastle and Leeds are spoken of for 1889 and 1890 respectively.

URIC ACID has been obtained by a new process—viz., by fusing together 1 part of trichlorlacetamide with 10 parts of urea.

A **DOUBLE FLUORIDE** of potassium and germanium has been prepared, the properties of which quite confirm Mendelejeff's prediction that "ekasilicon will yield a double fluoride, isomorphous with the double fluorides of silicon, titanium, zirconium, and tin, of greater solubility than that of silicon; and the fluoride, like the fluorides of titanium, zirconium, and tin, will not be gaseous."

PHARMACY IN INDIA.

GOVERNMENT DISPENSARIES AT THE HILL STATIONS.—The Government have issued the following Resolution regarding the petition that the prescriptions of duly qualified medical practitioners may be made up at the Government dispensaries at the hill stations of Mahableshwar and Matheran:—

Bombay Castle, 7th July, 1887.

Petition from Sir Dinsha Manockji Petit, Kt., and others, dated 28th May, 1887—Requesting that Government may be pleased to direct that prescriptions written by their medical advisers may be made up at the Government dispensary at Mahableshwar on the payment of any charges that Government may deem reasonable.

Letter from the Surgeon-General with the Government of Bombay, No. 2,979, dated 7th June, 1887—Submitting his report on the above; stating (paragraph 11) that the following are the prices given him by Messrs. Kemp & Co.:—

		Rs.	a.	p.
Mixture	8 oz.	1	0	0
,,	6 ,, ...	0	12	0
,,	4 ,, ...	0	8	0
Draughts	6	1	0	0
,,	1	0	8	0
Lotions	8 oz.	0	12	0
,,	6 ,, ...	0	10	0
,,	4 ,, ...	0	8	0
Ointments	2 ,, ...	1	0	0
,,	1 ,, ...	0	12	0
Liniments as lotions				
Pills	2	0	4	0
,,	1 doz.	0	8	0

observing that for mixtures containing expensive drugs an additional charge is made; and adding remarks.

Resolution.—The Governor-in-Council is pleased to rule that at the hill stations of Mahableshwar and Matheran prescriptions of duly qualified medical practitioners may be made up at the Government dispensaries subject to the conditions—

(1) that they are forwarded through the Superintendents of the stations;

(2) that the medicines mentioned therein are amongst those provided by Government for dispensaries;

(3) that payment is made for them according to chemists' list, mentioned in paragraph 11 of the Surgeon-General's report.

2. The receipts from such payments should be credited to the dispensary funds. No alteration is needed in the existing practice at the station of Panchgani.

INDIAN CURRY.—The recipes for real Indian curry given in English books do not produce what a pucka Anglo-Indian would say was the real article. Strange to say, although there is an immense quantity of curry consumed by all classes in the country, yet there is little or no curry-powder sold, even to Europeans, because the cook is in the habit of making his curry-paste every day fresh from the roots and seeds. I am now, like most Anglo-Indians who have been in the country any length of time, a curry-eater, and there is rarely a day on which I do not partake of the dish. There is nothing cooked in this country which so entirely satisfies the taste and appetite. One never seems to tire of the dish; but it is very certain if a dish of the roast beef of old England were given me every day for a month, I should by that time abhor the name of beef. It takes a long time to learn how to relish curry, and I was out in the country two years before I learnt how to eat it with pleasure. We make curried beef, curried mutton, curried tongue, curried chicken, curried prawns, curried pomfret, curried quails, curried pigeon, curried vegetables, and a dozen other curries, though beef is not much eaten for fear of tapeworm, which inhabits the bovine species too freely in India. My cook regularly every third morning brings his curry stuff with his vegetables and meat, which have to be fetched from the market. The supply costs one anna, or about one penny at the present exchange value, and this will make three large dishes of curried meat. This is the collection of spices, &c., he brings, one-third of which he will grind into a paste for each meat on his curry-stone of rough gneiss or trap rock.

	Pies worth.	
Garlic	¼	or 3 pods
Tamarinds	1	,, ½ oz.
Coriander	2	,, 5 drachms
Chillies	¼	,, 1 ,,
Poppy-seed	1	,, ½ oz.
Cummin-seed	1	,, ½ drachm
Cocoa-nut	2 or 3	,, 1½ oz.
Turmeric	1	,, 2 small rhizomes

And this constitutes true "Bombay curry stuff."

My cook makes a splendid mulligatawny soup. This is nothing more than a liquid curry with the addition of grain flour and cashew (the inside fruit-stone), or with a little extra poppy-seed; the addition of more maw-seed renders it extremely satisfying and palatable, due, no doubt, to the contained oil. Poppy-seed, though not given in English curry formulæ, is seldom omitted from real Indian curry and there is an extraordinary demand for it in the Indian bazaar.

TWO DAYS WITH THE IRISH EXAMINERS.

BY A SAXON.

FATE having willed my being located in Dublin, and my prospects there being by no means bad, I determined to try my luck at the L.P.S.I. examination.

Judging by the number of candidates that present themselves, it is not a qualification much sought after; still it is thought a great deal of here, and is a *sine quâ non* when applying for a public berth.

Having for three months placed myself under the guidance of a "grinder," whose system of teaching was excellent and not of the "cram" order, it was with a fairly light heart I entered the examination-room on the first eventful day. I should here mention that the examination is spread over three days, the first being devoted to practical, general, and pharmaceutical chemistry; the second to compounding and pharmacy; and the third to botany and materia medica. On this occasion one of the legal days fell on Good Friday, so it was arranged to condense the examination into two days.

I arrived at the room a few minutes before the time, and found my fellow-candidates in groups chatting together. After waiting about five minutes six of the candidates, including myself, were called to the benches for practical work.

Having taken up our positions, we were each handed a 1-oz. phial, which we were told contained a salt, and a 2-drachm one containing an alkaloid, both in solution, our analyses of which we were to write down. I had no difficulty in discovering nitrate of bismuth in the one and strychnine in the other. Finding the strength of a solution of hyposulphite of sodium by volumetric analysis (a subject, by the by, not required in the Minor) was the last of the practical chemistry. This I worked correctly, although I fear I was not very accurate, as the burette was an old-fashioned pour-out one.

This over, we were sent off to lunch. Once outside we began comparing notes, and, as we were all given the same things to test, my courage fell to zero when one told me he found pilocarpine and nitrate of tin, and another that he was certain the salt was citrate of bismuth. Verily, as results proved, they had learnt too much. I did not even know the test for pilocarpine. On returning, we were handed a printed paper of questions to answer, not very stiff, but one or two very artfully worded. I took two hours over this paper, and then came the *viva voce.*

I should here say that I had heard very bad reports of Mr. Draper, the chemistry examiner, and consequently on being called up, had he been a medical, and asked me where my heart was, I should certainly have answered, "In my mouth, sir." I was not a little surprised then at the simplicity of the questions asked, and only four, I think, in all. I suppose my answers must have pleased him, as I was dismissed so soon. I left the room feeling that my chance of passing was so far a good one, and that Mr. Draper was as fair an examiner as I should wish to meet.

The second and last day was divided as follows:—Morning for botany and materia medica, and afternoon for pharmacy and compounding. (The word "dispensing" is seldom or never used in Ireland.) Dr. Whitla, having to come up from Belfast, and being at the mercy of the railway officials, was hardly as punctual as he, I'm sure, would have wished. The slight delay gave us time to look around the room. I was not a little amused at the row of silent witnesses of Pharmacy Act infringements on the mantelpiece, collected no doubt with the idea of prosecutions of the offenders, the poverty of the society alone standing in the way. Conspicuous amongst them was a 1 lb. bottle that had contained Easton's Syrup, so labelled by the vendor, a cutting grocer in Dublin, "Poison" not having a place on the label.

The Doctor having arrived, we were started on the written part of the botany and materia medica. The questions were comparatively easy, but I think were of a style to tax one's memory too much, and appeal to *crammed* students rather than steady workers. For instance, one was—"Give the aquæ of the P.B.; state the most potent one, its strength and dose.' And another—"Give the vina of the P.B.; enumerating those not made with sherry, their strength and doses." Now very few men could give lists of preparations like these without making a mistake or omission. I actually left out vinum rhei from the full list.

My turn for *vivâ voce* having arrived, I was first of all shown a specimen that baffles all description, and the like of which I have never seen before or since. The Doctor only smiled when I acknowledged my ignorance; needless to say *I* did *not* smile. However, after this it was all plain sailing. Senega, colchicum seeds, gentian, and pellitory, artfully sliced to resemble each other as much as possible, nux vomica, &c., were easily recognised, and their preparations and doses given.

In botany I was as fortunate. A beautiful jonquil's peculiarities were duly explained, and the dandelion dissected and its parts named to the Doctor's satisfaction. That ended the morning's work. Only "one more river to cross," but that a broad one with varying currents. After about fifteen minutes allowed for lunch, we plunged into the writing once more, pharmacy being the subject. There were about eight questions, all searching, but not hard to a man that knew his Pharmacopœia. While we were at this the examiner, Mr. C. Evans, called up one man at a time for *vivâ voce*, and being near him my nerves were rather upset by the thoroughly searching examination he gave each man. At last my turn came. Was I nervous? Not a bit. The peculiar shaking of the chair as I took my seat beside him and the chatter of my teeth were due to my excessive delight at being in such good company. However, I was soon at my ease, for Mr. Evans, I presume, noticed my state and took compassion on me by gently leading me by the hand. "How do you make simple syrup?" and a few other such questions made me quite plucky, and thereafter I could answer with the same confidence I would in an ordinary class. Half an hour of questioning from one end of the B.P. to the other, in addition to reading and translating about half a dozen prescriptions, finished this part of the examination, leaving only compounding. I had three prescriptions—a draught (easy), pills (tricky), and ointment (easy), and two blisters for the ears. These done I was not long making tracks out of the building, and an hour afterwards was crossing over to Holyhead on my way to the Midlands, where I intended spending Easter, as light-hearted as if examinations were unknown to me. The day after Good Friday I received a telegram announcing my success, and I returned to Erin a full-blown L.P.S.I.

My experience may be summed up thus:—The examination is, on the whole, a very fair one—thorough, but not severe; and a man who survives the ordeal is quite qualified to undertake the duties and responsibilities of a pharmaceutical chemist, which is the title it confers on him.

The examiners, one and all, behaved kindly and gentlemanly, and with an absence of that brusqueness which so often bowls a candidate over.

Mr. Allen, the genial president of the society, was present on both days, and helped to make things as pleasant as possible for all parties. Mr. Ferrall, too, the registrar, was civility and attention personified.

I should mention there were thirteen candidates (unlucky number), and that six of these were plucked.

Trade Notes.

MESSRS. GEORGE STEWART & CO., sealing-wax manufacturers, of George Street, Edinburgh, have opened a London warehouse at 3 Dyer's Buildings, Holborn.

PEARS'S "You Dirty Boy" has penetrated as far as the sanctum sanctorum of the Prince of Wales at Sandringham. Where the shadow is, there will the substance be—we presume.

MESSRS. R. PARKINSON & SONS, wholesale druggists, Burnley, have purchased and adapted to their business a large cotton factory, five storeys high, with a total floor space of nearly three-quarters of an acre.

THE BRITISH AND COLONIAL AGENCY (LIMITED).—Mr. Justice Charles, sitting as vacation judge in the Chancery Division of the High Court of Justice, made a compulsory order on Wednesday last for winding up this company.

MESSRS. BEEDZLER & CO., of "Ye Golden Keye," 18 Norton Folgate, have issued a new price-list of drugs and preparations, all at much reduced quotations. A novel feature is a page containing "a list of a few doctors who are specialists on" certain complaints.

MESSRS. BURROUGHS, WELLCOME & CO. inform us that they will have pleasure in sending one of their photographic souvenirs of the Manchester Exhibition, alluded to by us a fortnight since, to any chemist who will signify his desire to possess one.

THE Brisbane correspondent of the *Chemist and Druggist of Australasia* names the travellers of two English drug houses who had been visiting Queensland, both of whom, he says, "carried samples of American printing matter." How is this? Labour and machinery cost 33 per cent. more in America than in England, and paper is 20 to 25 per cent. dearer there. And yet English firms find it advantageous to sell American labels to Australasian buyers!

Messrs. Williamson & Sons, of Worcester, have perfected their patent tin boxes by inserting in the spare lid a sliding steel tooth. When it is desired to open the tin, the tooth is moved an eighth of an inch from the side of the lid, the lid placed upon the tin, pressed down upon it, and turned round. This movement cuts out the bottom of the tin cleanly and easily; in fact, the tooth is a perfect can-opener.

UNIVERSAL PHOTOGRAPHIC DEVELOPING SOLUTIONS.—The "dry-plate" process of photography has its virtues, and it also has faults. One of the latter is that each maker's plates require different proportions of chemicals for perfect development. Messrs. Marion & Co. have removed this objection by introducing universal 10-per-cent. solutions of bromide, "pyro," and ammonia. On each bottle is a list of the leading plates, and against each name the correct quantity of the contents for each is stated in minims, so that the solution serves for all. The idea is the same as the "concentrated liquors" of pharmacy, and will be appreciated.

INDIARUBBER STAMPS.—The introduction of indiarubber as a material for die-stamps has in the course of a decade greatly developed and multiplied the uses of stamps. We have recently examined some of the patterns manufactured by Mr. A. W. Pollard, of 30 & 32 Ludgate Hill, E.C., and have been struck with the manner in which he has kept pace with the times, both as regards clearness of type and elegance of design and mounting. For example, a few shillings buys a handsome nickel-plated watch or locket, with name and address or anything similar on a stamp inside. The dating stamps work in a very simple manner, and are particularly useful for chemists. Many of the border designs used for stamps for ordinary business purposes are of a highly artistic character, and the varieties of type employed appear to be numberless. Mr. Pollard has an illustrated catalogue of his stamps, without prices, for the use of his agents. Chemists might do better business in this line if they made good use of the catalogue. It is a business which gives no trouble and carries a good commission with it. Those who do not desire to go into the business but who require a stamp should try Mr. Pollard. He is evidently well acquainted with what chemists require.

BANKRUPTCY REPORTS.

Re Herbert Taylor, Merchant (trading as David Taylor & Sons).

The receiving order in this case was made on July 14, and the first meeting of creditors is fixed for September 28. The following is a summary of the debtor's statement of affairs, to which we append the observations of the Assistant Official Receiver :—

Liabilities.

	£ s. d.	£ s. d.
Creditors unsecured		18,538 0 11
„ fully secured	10,845 10 2	
Estimated value of securities	11,345 10 2	
Surplus to contra	500 0 0	
Creditor partly secured	20 16 8	
Less estimated value of security	5 8 0	
		15 8 8
Other liabilities	95,054 7 0	
Amount expected to rank against estate ..		9,700 18 0
Liabilities on bills discounted	994 13 6	
Not expected to rank.		
Preferential creditors, for rent, wages, &c...	76 19 11	
Deducted contra.		
		28 254 7 7

Assets.

	£ s. d.	£ s. d.
Cash		165 0 0
Stock warrants		200 0 0
Furniture, &c.		75 0 0
Other property		1,600 0 0
Book debts, good		5,927 13 7
„ doubtful	7,735 17 8	
„ bad	3,528 0 7	
	11,263 18 3	
Estimated to produce		1,270 0 0
Bills of exchange		114 2 1
Estimated surplus from securities held by creditors..		500 0 0
		9,851 15 8
Deduct preferential debts for rent, wages, &c.		76 19 11
		9,774 15 9
Deficiency		18,479 11 10
		28,254 7 7

The receiving order was made on the debtor's petition. He states that in 1850 he became a partner in the firm of "David Taylor & Sons," established in 1792; that after various changes he, in 1875, the capital of the firm being then about 25,000*l.*, took his son, Mr. Herbert John Taylor, who introduced no capital, into partnership, giving him one-fifth share of the profits. This partnership terminated in 1878; that he then took a brother-in-law, John Daniel, into partnership, giving him a nominal interest of 200*l.* per annum until his retirement in 1882, when Mr. H. J. Taylor rejoined the firm on the same terms as before, and retired finally on May 6, 1887, when the debtor took over the assets and liabilities of the firm; but he has not made out a separate account of such partnership, on the ground that the necessary delay would not be justified, as his son is not possessed of any assets to meet liabilities for which he might be ultimately proved to be liable. The debtor attributes his failure to the suspension of payment of "Messrs. Winthrop, Cunningham & Sons," of Philadelphia, U.S.A., and to his consequent non-receipt of remittances to meet his current acceptances on their account to the amount of about 15,000*l.*, which amount, however, is now reduced to about 9,700*l.* 18*s.* (see "Other liabilities"), owing to the holders of certain of the bills having agreed to take over goods in respect of which they were drawn.

He has kept proper books of account, and prepared balance sheets at the end of each year, which show as follows at and since December 31, 1883 :—

December 31, 1883.—Surplus, 21,026*l.* 18*s.* 8*d.* December 31, 1884.—Drawings: H. Taylor, 3,355*l.* 19*s.* 11*d.*; H. J. Taylor, 3,074*l.* 7*s.* 8*d.* Capital introduced by H. Taylor, 900*l.*; interest on capital credited to H. Taylor before dividing profits, 500*l.*; surplus, 15,996*l.* 11*s.* 1*d.* December 31, 1885.—Profit, 5,002*l.* 11*s.* 5*d.* Drawings: H. Taylor, 3,776*l.* 6*s.* 2*d.*; H. J. Taylor, 3,025*l.* 19*s.* 7*d.* Interest on capital credited to H. Taylor before dividing profits, 700*l.*; surplus, 14,896*l.* 16*s.* 9*d.* December 31, 1886.—Profit, 2,881*l.* 1*s.* 10*d.*; bad debts written off, 1,697*l.* 0*s.* 1*d.* Drawings: H. Taylor, 959*l.* 1*s.* 10*d.*; H. J. Taylor, 3,456*l.* 4*s.* 4*d.* Surplus, 11,665*l.* 12*s.* 4*d.*

The surplus of 11,665*l.* 12*s.* 4*d.* at December, 1886, was, however, subject to reduction by further doubtful debts, which have since proved bad and have been written off. The ascertained surplus is thus, say, 4,553*l.*

The loss of the last-mentioned amount and the present deficiency are explained by the debtor as follows :—

	£ s. d.	£ s. d.
Estimated loss by bad and doubtful debts, as per statement of affairs		9,993 18 3
Estimated liabilities on acceptances on account of W. Cunningham & Sons		9,700 18 0
Estimated net loss on trading since January 1, 1887		143 15 7
Aggregate of taxes paid on Iowa property (see "Other property")		137 0 0
Drawings of partners since January 1, 1887 :—		
H. Taylor	1,330 0 0	
H. J. Taylor	1,727 0 0	
		3,057 0 0
		23,032 11 10
Deduct capital at December 31, 1887		4,553 0 0
Deficiency, as per statement of affairs		18,479 11 10

The unsecured debts include claims amounting to 11,392*l.* 12*s.* 6*d.*, stated to be due to members of the debtor's family for monies borrowed, and an amount of 228*l.*, representing the present value for commuting future premiums to be paid on a policy for 999*l.* settled upon his wife by ante-nuptial settlement executed in 1853. The securities held by creditors treated as fully secured are stated to consist of (1) a balance of cash, 755*l.* 5*s.* 3*d.*, at his bankers', retained by them against loans, 9,095*l.*, for which they also held five bills of exchange, 3,915*l.*, and dock warrants for various goods of the estimated value of 4,924*l.* 14*s.* 9*d.*, and (2) six policies on the debtor's life (held by the insurance company) for a total amount of 5,454*l.*, including bonuses, effected at various dates, and estimated by him at the amount of advances thereon, viz., 1,750*l.* 10*s.* 2*d.* The "other liabilities," 85,353*l.* 9*s.*, not expected to rank, are stated to consist of the debtor's acceptances on account of various firms in different parts of the world, and the said firms, being bound to provide for such bills at maturity, have at this date (September 9) taken them up to the amount of 45,000*l.*, and his liability has ceased to that extent. He states that by a deed of separation in August, 1882, he undertook to pay to a trustee on behalf of his wife during their joint lives a sum of 1,500*l.* per annum, and upon his decease to leave 30,000*l.* in the hands of trustees, the income therefrom to be paid to Mrs. Taylor during her life, and, upon her death, the principal to pass into the residue of his estate. He further states, however, that there is a covenant in the deed that if the parties live together again it becomes absolutely void, and an actuary having informed him that, in the absence of data for determining the probability of such event, no actuarial value could be assigned, no estimate of the amount of such liability appears in his statement of affairs. The "other property," 1,600*l*, is stated to consist of four policies for 1,000*l.* each on the debtor's life, effected at various dates, the total surrender value of which is ascertained to be 1,400*l.*; ninety shares in the Commercial Bank of London (in liquidation), not treated as of any value; some shares in the National Bank, estimated at 100*l.*; two boats at Southampton, 50*l.*; a freehold cottage at Hastings, 50*l.*; and some lots of freehold land in Iowa, U.S.A., which are stated to be unrealisable and subject to an annual charge for taxes.

The following is a list of the creditors of 10*l.* and upwards :—

Unsecured Creditors.

	£	s.	d.
Allen, S., & Sons, London	15	4	3
Alessi, Guiseppe, Messina, Sicily	12	2	5
Bailey, William, & Son, Wolverhampton	18	7	9
Baker, H. J., & Bros., New York, U.S.A.	124	7	2
Blount, Thomas J., Southampton	27	4	6
Brown & Elmslie, London	20	5	2

	£	s.	d.
Bowyer, F. W., & Bartleet, London	218	9	5
Cailler, Walker & Co., Messina, Sicily	353	10	6
Calleja, S., y Rinz, Santa Cruz, Teneriffe	578	15	2
Calvert, F. C., & Co., Manchester	30	4	1
Cereals Manufacturing Co., New York, U.S.A.	10	0	0
Christopherson, C., & Co., London	190	12	3
Dalton & Young, London	43	10	9
Daniel, J., Exmouth	1,397	1	2
Davenport, J. T., London	59	0	2
De Pasquale, S. F., & Frat, Messina, Italy	209	11	0
Dietzel & Co., Lauban, Silesia, Germany	12	0	0
Fardell, T., & Son, London	16	8	0
Fay & Co., Southampton	20	0	
Glaenzer & Co., Paris, France	242	6	
Hall & Son, London	10	0	0
Hardy, J. A., Hobart, Tasmania	25	0	2
Herrings & Co., London	72	19	5
Horner, J. B., New York, U.S.A.	400	0	0
Langley & Michaels, San Francisco, U.S.A.	14	16	10
Lavino, A., & Co., Smyrna, Turkey in Asia	130	5	7
Lewis & Peat, London	393	9	0
Lloyd, T. E., Cardigan	228	0	0
Lugan, M., Oporto, Portugal	25	10	3
Major & Field, London	11	1	10
Masanet, S., New York, U.S.A.	859	1	3
McIntyre, J. H., & Sons, London	10	0	0
Merry, T., & Son, London	89	9	3
Morphy, H., Genoa, Italy	24	0	0
Oyarzabal, J., Malaga, Spain	95	13	9
Puddy, J., & Co , London	10	16	3
Pustan, C. van, & Co., New York, U.S.A.	100	0	0
Randall & Son, Southampton	19	13	6
Saloman, L. A., & Bros., New York, U S.A.	19	15	3
Schieffelin, W. H., & Co., New York, U.S.A.	13	13	6
Smith, C., Son & Co., London	25	0	0
Souratty, G. N., & Co., London	79	12	6
Spring, A. C., & Co., Boston, U.S.A.	202	10	8
Stevens, J., Southampton	10	0	0
Taylor, Eliza, London	4,209	11	0
Taylor, Rebecca (Estate of), London	2,943	19	9
Taylor, Sarah (Estate of), London	2,837	0	7
Thomsen, J. J., Baltimore, U.S.A.	114	9	3
Townley, C., London	180	0	0
Tyler & Finch, New York, U.S.A.	188	13	8
Verga, Fratelli, Palermo, Sicily	240	3	11
Vogeler, Son & Co., Baltimore, U.S.A.	83	7	6
Weaver & Sterry, New York, U.S.A.	229	4	3
Westwood, J. (Exors. of), London	600	0	0
Widnes Alkali Company, Widnes	67	12	11

Creditors Fully Secured.

	£	s.	d.
Church of England Assurance Company, London	1,750	10	2
Prescott & Co., London	9,095	0	0

Creditors Partially Secured.

	£	s.	d.
Case, Thomas, & Co., London	20	16	8

There are about forty creditors for amounts under 10*l*., and the following "preferential creditors":—

	£	s.	d.
City of London Real Property Company (Lim.)	20	0	0
Dommerson, T. H., London	11	15	7
Ellis, J. S., London	42	16	8

J. Scott, Plymouth, Chemist.

The sitting for the public examination of this debtor was held at the East Stonehouse Bankruptcy Court on September 14, before Mr. Registrar Edmonds. The Official Receiver (Mr. J. Greenway) represented the Board of Trade, and Mr. W. H. T. Dawe, solicitor, watched the case in the interest of the debtor. In answer to the Official Receiver, debtor said he commenced business in 1873 at Preston, starting with 300*l*., borrowed money, a sum which was still owing, with interest. The larger portion of the sum was borrowed from Miss Crossfield, an aunt of his wife. He remained in business at Preston until May of the present year. In 1875 he received 1,200*l*. from the Yorkshire Railway Company for displacement of his business, the whole of which sum was invested in the business. He purchased a dwelling-house, and turned it into a business. That house was still subject to a mortgage. In the opinion of his solicitor the value of the property did not exceed the mortgage upon it. The Official Receiver here informed the Registrar that he ascertained there would be a margin of 100*l*. or 200*l*. on this property available for the creditors. Debtor, resuming, said that in May last he came to Plymouth, having disposed of his business at Preston for 600*l*, out of which he paid 380*l*. to clear off outstanding debts. He came to Plymouth thinking to improve his position. He gave 180*l*. for the business, which was represented to him as being a good one. There was a post-office in conjunction with the business, with an annual salary of 40*l*., but out of that he had to pay a clerk 12*s*. a week, so that the post-office was not very remunerative. He did not find the chemist's business a success. When he came from Preston he brought his furniture with him. It was untrue that he had removed any of his furniture with the exception of a piano, which was lent to his daughter by his aunt, and which had been returned to the latter. Executions which were put in for rent and gas drove him to the Bankruptcy Court. He had attempted to meet his creditors prior to taking that step, and it was supposed then that his estate would have realised 5*s*. in the pound. Nothing, however, came of it. The Registrar: Is there any objection to the debtor passing? The Official Receiver: None. He has given me every assistance; but it is a great misfortune that he ever came to Plymouth. Debtor was accordingly allowed to pass.

Medical Gleanings.

Acetphenetidin as an Antipyretic.

Fifty cases of fever have been treated in the Vienna Hospital with acetphenetidin, the new antipyretic, and the opinion arrived at is that it is a safe remedy, causing a slow diminution of temperature, which in from four to six hours amounts to as much as 2° C. There are no disagreeable after effects.

Urea Quinine.

Hydrochlorate of quinine and urea being soluble in its own weight of water has a distinct advantage over the other salts of quinine for hypodermic use. A solution made by dissolving 15 grains of the salt in 20 minims of water does not influence the tissues when injected into the tissues. In malarial diseases, it is stated to be superior to other quinine salts, especially for hypodermic use.

New Treatment for Eczema.

Dr. Radcliffe Crocker has proposed a new way of treating obstinately recurring eczema, which is well worthy of attention as it does not interfere with other treatment. The method consists in the application of a counter-irritant, not to the part affected, but to other parts of the body, which have some connection with the nerve-centres. The counter-irritant used is an ordinary mustard leaf, but when that is not sufficiently strong a blister is produced with liquor epispasticus. For the face alone the mustard leaf (or blister, as the case may be) is applied behind the ear; for the face and forearms apply it to the nape, and for the leg the counter-irritant should be applied on the hip over the large sciatic nerve. In most cases this treatment has been followed by removal of the itching, and the relief lasts from one to several nights. The redness and swelling are also relieved.

Pepsin in Muscle.

Brücke was the first to show that pepsin exists in muscular and other tissues. When muscle turns acid, as it does during rigor mortis, the pepsin which it contains is enabled to act, and on keeping it at a suitable temperature (35°–40° C.), albumoses and peptones are formed by a process of self-digestion. The explanation usually advanced regarding the passing off of rigor mortis is that it is due to putrefaction; but this, according to Dr. W. D. Halliburton, will not hold in cases in which rigidity passes off within an hour after death, and in those cases in which rigidity remains after putrefaction has set in. If the disappearance of rigor be regarded as the first stage in the self-digestion of muscle, the varying time at which rigor passes off might then be explained by the varying amount of pepsin in the tissues, which again would vary with the condition of the alimentary canal.

Gazette.

PARTNERSHIPS DISSOLVED.

Foulds & Foxon, Loughborough, chemists and druggists.

Hewett, F. C. C., & Davis, W. P., St. Mary's Chambers, St. Mary Axe, and Enfield, under the style of the Atlas Quinine Company, manufacturers of quinine.

Lockwood, H., & Co., Newton Heath, chemical manufacfacturers.

THE BANKRUPTCY ACT, 1883.

Receiving Orders.

Blyth, William Francis, Victoria Park Square, Bethnal Green, surgeon.

Woodliffe, Alfred, Bridlington, chemist.

The following amended notice is substituted for that published in the *London Gazette* of Sept. 9:—

Lowe, Walter, (trading as Walter Lowe & Co.), Irlam, near Warrington, and Chorlton-on-Medlock, Manchester, chemist and druggist and manufacturing chemist.

First Meetings and Public Examinations.

Cranfield, Samuel, Rolvenden, Kent, veterinary surgeon. Sept. 23, 4 Pavilion Buildings, Brighton; Oct. 3, Town-hall, Hastings.

Lowe, Walter (trading as Walter Lowe & Co.), Irlam, near Warrington, and Chorlton-on-Medlock, Manchester, chemist and druggist and manufacturing chemist. Sept. 29, Official Receiver's offices, Manchester; Oct. 5, Court House, Manchester.

Adjudications.

Lowe, Walter, Irlam, near Warrington, and Chorlton-on-Medlock, chemist and druggist and manufacturing chemist.

Woodliffe, Alfred, Bridlington, chemist.

Notice of Dividend.

Adamson, William Bowser, Newcastle-on-Tyne, druggist and drysalter. First div. of 2*s*. 2*d*., Sept. 26, Official Receiver's Office, Newcastle-on-Tyne.

MARRIAGE.

[*Notices of Marriages and Deaths are inserted free if sent with proper authentication.*]

Ferriday—Wilton.—On September 12, at Handsworth parish church (by the Rev. J. Alexander Smith), by licence, Edwin J. P. Ferriday, Hagley Road, Edgbaston, eldest son of Enoch Ferriday, Rose Villa, Oakengates, Salop, to Annie, third daughter of John Wilton, Ashted, Birmingham.

DEATHS.

Northway.—On September 11, at his residence, 89 Guildford Street, Mr. John Northway, chemist and druggist, of 134 Theobalds Road, Holborn. Aged 65.

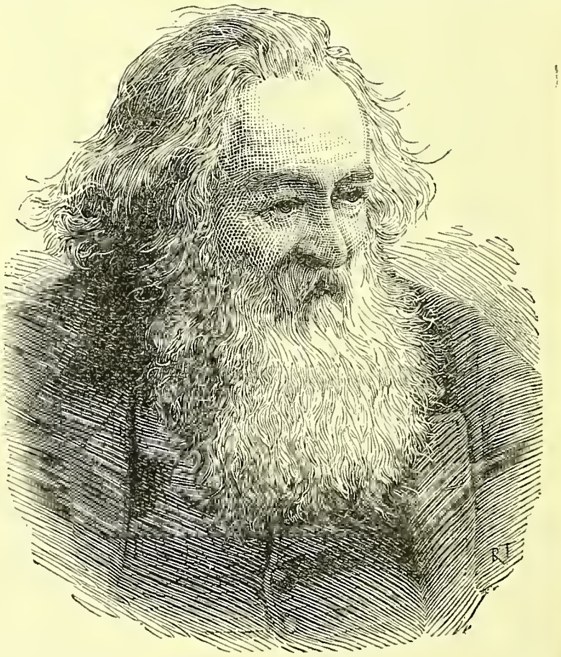
Quain.—On September 15, at 32 Cavendish Square Mr. Richard Quain, F.R.C.S., F.R.S., Surgeon Extraordinary to the Queen. Aged 87. Mr. Quain began his career in 1828, and speedily rose to high distinction, having for some time held the appointment of Demonstrator of Anatomy at University College. He wrote many books on medical subjects, such as "Anatomy of the Arteries of the Human Body."

[The deceased gentleman must not be confounded with his namesake, Dr. Richard Quain, the chairman of the Pharmacopœia Committee of the General Medical Council.]

Sharland.—On July 22, at his residence, Princes Street, Auckland, James Cragg Sharland, J.P. Aged 68. Mr. Sharland was one of the early settlers, having landed in New Zealand in 1847. Taranaki was the field selected, and in New Plymouth he commenced business as chemist and druggist (to which trade he had been trained in the old country), but afterwards entered upon that of a general merchant. In 1860 the outbreak of the disastrous Maori war, which caused Mr. Sharland severe commercial losses (his store being destroyed by fire), led to his removal to Nelson, Hokitika, and finally to Auckland, where he purchased the business of Mr. Edward Manning, chemist, in Shortland Street, and carried it on until the day of his death. Several years back he established a wholesale business in Victoria Street East, but the rapid increase of business soon necessitated more room, especially for the manufacture of those specialties which have made the name of the deceased almost a household word in the colony. On removing the wholesale business to the large and commodious building in Lorne Street at present occupied by this firm, Mr. Sharland on account of ill-health relinquished it to his sons, Mr. Fred. C. Sharland and Mr. Charles Sharland (now managing the London branch), and son-in law, Mr. John F. Churton, and devoted his whole attention to the retail business.

Skalweit.—On September 5, Dr. Johannes Skalweit director of the investigation office of the Association of German Analytical Chemists, died suddenly at Hanover, of heart-disease. The deceased was a distinguished representative of practical chemistry, having been director for many years of the Society of Analytical Chemists, and editor of the periodical "Repertorium der Analytischen Chemie." Upon hearing of Skalweit's death, Dr. Schmidt, of Wiesbaden, the present president of the Society of Analytical Chemists, postponed the general meeting of the Association—which was about to be held, and for which invitations had already been sent out—*sine die.*

Strauss.—Dr. G. L. M. Strauss, the well-known "Old Bohemian" of literary circles, died, at a very advanced age, at Teddington, a fortnight ago. He was one of the earliest contributors to The Chemist and Druggist, and more recently wrote for us several articles entitled "An Octogenarian's Pharmaco-Medical Reminiscences of Sixty Years Ago," which were published by us in 1884 and 1885. He was born in Lower Canada, but was brought to Europe in early life, and lived at various periods of his career in England, France, Germany, Poland, and Russia. He studied at Halle, Leipsic, and Berlin, and took his philosophical degree at the last-named university. Dickens took him as the original of Dr. Goliath in "Mrs. Lirriper's Lodgings," and the old gentleman told his own history in pleasant disjointed fashion in the "Reminiscences of an Old Bohemian," published a few years since. Our portrait is from a photograph by Fradell & Young, Regent Street.



TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London, W.C.

From the " Trade Marks Journal," September 7, 14, *and* 21.

"Laundry Foam," and other wording, on label; for a preparation for the laundry. By L. F. Groffman (trading as The Laundry Foam Company), 311 Amherst Road, Stoke Newington, N. 60,547.

"Universal"; for medicine-chests of wood. By Day & Sons, Crewe. 62,673.

"Cinot Wena," and other wording, on label; for a preparation for the hair. By K. T. Sutherland (trading as Wade & Co., manufacturing chemists), Saville Street Works, Manchester. 62,937.

"The Burton Sauce," and other wording, on label; for a sauce. By Sophia Goodall, Burton Joyce, Nottingham. 63,462.

"Royal Cachou Lozenges," and other wording, on label; for a sweetmeat. By Meggeson & Co., 14 Miles Lane, E.C. 63,636.

"Gamgee's Powder"; for an antiseptic. And "Gamgee's Fluid"; for a fluid antiseptic. By The New Chloralum Company, Wilmer Gardens, Kingsland Road, E. 63,797–8.

"Frank Comer's Wintergreen Tooth paste," and other wording, on label; for a preparation for the teeth. By Frank Comer, D.D.S., J. P. Dakin, and V. L. Fellows, chemists, 79 Queen's Gate, South Kensington, S.W. 64,254.

"Curetta"; for a toothache cure. By George Ayre (trading as George Ayre & Son), chemist, Thirsk. 64,564.

"Dr. Richter's Kafir Pills," "Dr. Richter's Sarsaparillian," "Dr. Richter's Sedative," "Dr. Richter's Inga Pills," "Dr. Richter's Ariko Lozenges," and "Dr. Richter's Assaba Lozenges"; for medicinal preparations. By Dr. F. A. Richter (trading as F. Ad. Richter & Co.), 1 Railway Place, Fenchurch Street, E.C. 64,789–64,794.

"Ferris & Co"; for medicated pessaries, &c., and for clinical thermometers. By Messrs. Ferris, Boorne, Townshend & Boucher (trading as Ferris & Co.), Bristol. 64,900–1.

"Aromia"; for a ringworm tincture. By J. A. Clark, chemist and dentist, The Broadway, London Fields, Hackney, E. 64,910.

"Dentiflora"; for cleansing preparations for the teeth. By A. Brooker, chemist, Hastings. 65,094.

"Orni"; for medicines and foods for birds. By E. Bairstow, 3 Thornton Road, Bradford. 65,301–2.

"Bromidine," and signature of depositors; for antiseptics and disinfectants. By May & Baker, manufacturing chemists, Battersea. 65,530.

"Sargood's Inhaler"; for an apparatus for inhaling. By J. Sargood, gasfitter, 5 Carlisle Street, Lambeth, London. 61,599.

"St. Ann's Natural Aperient Water," and figure of a pump; for a natural aperient water. By F. Crossby, chemist, Buxton. 62,243.

"A. Davis's Silver, Brass, Metal, Zinc, and Electroplate Polish," and other wording, on a label; for polishing-powder. By H. Forbes, 29 Lanark Villas, Maida Vale, London. 62,712.

"M," within trefoil and circle; for graduated glass bottles, glass bottles, and feeding-bottles and drinking-flasks. By S. Maw, Son & Thompson, 7 to 12 Aldersgate Street, E.C. 63,118–63,120.

"Epidermaline"; for chemical substances (Class 3). By The West Indian Manufacturing Company, chemists, 15 Cortlandt Street, New York, U.S.A. 63,209.

Signature and initials of the depositor; for patent medicines, By W. Bottomley, chemist's assistant, 43 Croom Terrace, Hopwood Lane, Halifax. 63,456.

"Spong's Bedfordshire Pig-powders," and figure of a pig, on circular label; for pig-powders. By Spong & Son, agricultural chemists, Biggleswade, Beds. 63,438.

"Fritz & Co," with figure of a crane; for a medicinal preparation. By Fritz & Co., manufacturing chemists, Litherland Road, Liverpool. 63,766.

"John R. Hall's Wood Violet,' in script; for extract of wood violet. By E. R. Biggleston, chemist, Canterbury. 63,897.

"Sanitas," and figure of a tree; for preparations for use in medicine; apparatus, &c., used in warming, ventilation, &c. By The Sanitas Company (Limited), Three Colt Lane, Bethnal Green, E. 64,575–7.

"Ichthyolate" and "Ichthyolicum"; for chemical substances (Class 3). By Ichthyol Gesell. Hermanni & Co., Hamburg. 64,841–2.

Figures of two children, on circular label; for farinaceous foods. By H. Epprecht, Zurich. 64,920.

"Kananga"; for a perfume. By J. B. F. Rigaud (trading as Rigaud & Cie), 8 Rue Vivienne, Paris. 57,506.

Figure of a sponge-diver on ladder, &c.: for sponges. By Cresswell Bros., 2 Red Lion Square, W.C. 62,728.

"Dr. H. Stapleton-Edwardes' Gout and Rheumatic Cure," and other wording, on four-pannelled labels. By Dr. H. Stapleton-Edwardes, registered medical practitioner, and H. F. W. Edwardes, patent medicine vendor (trading as Edwardes & Son), 89 New Church Road, Camberwell, S.E. 63,929.

Monogram of depositor in design; for ointment, pills, and a chemical preparation. By Thomas Lewis, commission agent, 89 Elm Street, Roath, Cardiff. 63,981.

"Sea View Saline," and a sea view, on label; for a medicinal preparation. By T. E. Butler & Son, chemists and druggists, Leicester. 64,087.

"Eau Magique"; for perfumery. By T. L. S. Pickard, hair-dresser, 251 Kentish Town Road, N.W. 64,093.

"Sozedus," and signature, on figure of a vase; for an antiseptic. By A. P. Wire, certificated schoolmaster, 1 Seaton Villas, Birkbeck Road, Harrow Green, E. 64,209.

"The Morelline Pad"; for a medicated appliance. By T. Grant & Sons, Maidstone, and 46 Gresham Street, E.C. 64,660.

Figure of a syringe; for a purgative of fluid substance. By Dr. Anton Oidtmann, Maastricht, Holland. 64,696.

"Brooker's Eucalyptogen," and other wording, on label; for a liquid perfume. By A. Brooker, chemist, Hastings. 65,092.

Cinchona Statistics. — At a recent meeting of the Wynaad Planters' Association it was stated that the trees growing in Wynaad from the Ouchterlony Valley to North Wynaad, excluding Nellacotta and Neddiwuttum and Districts north and east of those boundaries, numbered, in round figures, 7,250,000 Succirubras, 2,500,000 Ledgerianas, and 750,000 Hybrids, and that the outturn of bark in the next three years was estimated at 5,000,000 lbs. This includes very little Ledger bark, most of which would not be harvested before 1890. The estimated crop of Government cinchona in Java for the season 1887 is 700,000 *half* kilos. (750,000 lbs.), not *kilos*, as reported on page 357 of our last issue.

ON PUTTING UP PROPRIETARY ARTICLES.

It may be taken for granted that pharmacists are fully cognisant of the fact that, looked at from a mere buying and selling point of view, it is not always the actual medicinal value of a preparation that ensures a large sale. At the present time a preparation is being sold as an external specific for every kind of skin disease, which contains nothing but powdered borax and elder-flower water. It is just as essential that a proprietary article should be neatly put up, and so finished off that, whether on the counter-case or in the window, it will attract attention, as it is that the contents should to some extent fulfil the purposes for which they are recommended.

It is the object of this paper to offer a few hints with reference to the putting up of stock, so as to make it attractive and "catching" to the public eye. The matter of successful and scientific advertising demands separate consideration, and may be treated in a subsequent paper.

Commencing with a few of the most largely sold preparations, let us take—

(1.) Cod-liver Oil.—This important stock article is almost invariably put up in 8-oz and 16-oz. green flints, capped with skin, paper, or tin-foil, and a large label affixed. Originality in labels is conspicuous by its absence, as a rule, in pharmacies, and notably so in the case of cod-liver oil. In nine cases out of ten the label is of the tombstone fashion, with the familiar illustration of the *Gadus morrhua* floating across the top. An alternative at least to this depressing style is that the oil should be in panelled bottles, capsuled, not capped, the bottle to be enclosed in a card case and wrapped in unglazed tinted paper. The label should be panel-shaped, the same length as the case. The printed matter might consist of a neat engraving of the cod-fisheries in the left-hand corner, the other top corner being occupied by the words "Cod-liver Oil," with uses, dose, and retailer's name and address beneath.

(2.) Blood-purifiers. — Few medicines are more often required than those for purifying and enriching the blood, and yet how seldom, comparatively, do chemists keep a preparation of this kind ready packed? As a rule, all that is done is to bottle some decoct. sarsæ. co. conc. and label it as such. More profit would certainly be obtained by putting up, say, a "Compound Syrup of Sarsaparilla," or "Red Clover Blood-purifier," in 12-oz. or 16-oz. bottles, cased and wrapped in buff or white enamelled paper. The formulæ for the above preparations are as follow :—

Compound Syrup of Sarsaparilla.

Decoct. sarsæ co. conc.	℥xij.
Infus. sennæ conc.	℥ij.
Ext. glycyrrhiz. liquid.	℥ij.
Potass. iodid.	ʒiij.
Syrup. simpl.	℥100
Ol. sassafras	♏v.
„ anisi	♏v.
„ gaultheriæ	♏iij.

Misce. *Dose.*—One to two tablespoonfuls.

Red Clover Blood-purifier.

Liquid extract red clover	℥viij.
Sp. vini rect.	℥v.
Syrup. simpl.	℥xxxvj.
Potass. iodid.	ʒiij.
Aq.	℥xx.

Misce. *Dose.*—One to two tablespoonfuls.

If a cheap article be required, a novelty in this country would be the "German Blood-purifying Tea," a packet containing about 1½ oz. of the following mixture—

Pulv. sennæ	℥xiiss.
„ coriand.	℥iij.
Manna	℥vj.
P. acid. tart.	℥ss.

Misce.

This should be packed in round parcels, enclosed in a card-tube, and retailed at 1*s*. It makes one pint of decoction.

(3.) Diarrhœa Mixtures.—Chemists seem to have hailed with delight the publication by the Local Government Board of the formula for the familiar chalk and aromatic confection mixture. At all events it seems to have been almost universally adopted as a stock article, though its appearance when unwrapped is the reverse of attractive. Customers suffering from summer laxativeness would like the sound of "Blackberry and Ginger Cordial," and having tried the remedy would like its effects also. The formula is :—

Blackberry and Ginger Cordial.

Fluid extract blackberry root	℥v.
Tinct. zingib. fort.	℥j.
„ catechu	℥iss.
„ camph. co.	℥iiss.
Syrup. simpl.	℥iv.
Aquæ	℥iv.

Misce. *Dose.*—ʒj to ʒiv.

This preparation, in 4-oz. white glass bottles with a neat label, looks well and sells well.

(4) Iron and Quinine Tonic.—Of all stock preparations this is probably the most hackneyed. It is put up in all sizes and at all prices from 4*s*. 6*d*. for 8 oz. to 1*s*. 9*d*. for 16 oz. The chocolate label with white type is largely used, but has long since lost the charm of novelty which it possessed when first issued. It is possible that an increase of sales might be discovered were it sold under the name of "Iron Tonic Bitters," in half-pint and pint hock bottles, capsuled and attractively labelled. A formula would be—

Iron Tonic Bitters.

Ferri et quin. cit.	ʒij.
Acid. citric.	ʒiss.
Sacchar. alb.	℥ij.
Tinct. aurant.	℥j.
„ nucis vom.	ʒij.
Aquæ	℥x.
Vin. Xerici ad	Oj.

Misce.

(5.) Aperient Medicines —There is scope for novelties in this department of stock. It is not intended here to introduce any suggestions for *pills*, beyond saying that the practice of putting them up in bottles instead of boxes adds greatly to their attractiveness, particularly when sugar or gelatine coated.

As a pleasant form of black draught the "Cathartic Elixir" may be mentioned. It should be put up in 4-oz. oval bottles and plainly labelled. Its composition is—

Cathartic Elixir.

Mag. sulph.	℥viij.
Fol. sennæ	℥vij.
Podophyllin	ʒj.
Glycyrrhizæ	ʒxxx.
P. zingib.	ʒiiss.
Cort. rhamn. frang.	ʒxv.
Elixir aromat. ad	℥xxx.

Macerate for 7 days. *Dose.*—ʒj. to ʒiv.

A novelty in aperient remedies for stock would be "Anti-Constipation Cones." These are suppositories, put up in half-dozens in slide card-boxes, wrapped in tinted paper. Their composition is :—

Anti-Constipation Cones.

Extract. stramon.	gr. j.
P. sapon. cast.	gr. v.
Sod. chlorid.	gr. iij.

Ol. theobrom. q.s. ut ft. supposit. j.

Vegetable Worm Powders will sell well. The ordinary santonine powders will do, but are much improved by the addition of ⅛ grain of podophyllin in each. Six in slide box, wrapped in white enamelled paper, with label printed in carmine and black, look very stylish.

Toilet Requisites next demand attention, and as good prices are usually obtained for these goods no pains should be spared in turning out the articles in first-rate style.

A variation of the familiar *Blanc de Perle* will be found in the following:—

Zinc oxid.	ʒij.
Cret. precip.	ʒvj.
Bismuth. oxychlor.	ʒj.
Boracis	ʒss.
Carmin.	gr. iv.
Glycerini	ʒvj.
Aq. rosæ ad	℥iv.

Misce.

To be put into opaque white square bottles. Cut the cork into a wedge shape and cap with skin. A very tasteful label, "Charm of Beauty," &c., should be used.

Pimple Wash.—The following is of genuine value in eczema, acne, and for pimples. It should be bottled in 4-oz. white panels, cased and wrapped in pink enamelled paper:—

Pimple Wash.

Aquæ coloniensis	℥j.
Sp. ammon. co.	ʒiij.
Potass. iodid.	℈j.
Sod. bicarb.	ʒij.
Hydr. iodid. rub.	gr. x.
Aq. camphoræ ad	℥iv.

Misce.

Somewhat similar in its action, though not so powerfully medicinal, is the

May Dew Lotion.

P. boracis	ʒj.
Glycerini	℥ss.
Sodæ sulphitis	ʒij.
Aq. rosæ trip.	℥v.
Aq. dest. ad	℥x.

Misce.

Put up in $\frac{1}{2}$-pint white round bottles. Label artistically; a very pretty combination of colours is blue, red, and silver. This will retail easily at 2*s.* 6*d.*

Camphor Ball.—Here is an instance showing how improvements can be made in minor proprietary articles. At present camphor balls are almost always packed in purple slide cases, and pharmacists know how soon the goods get greasy and dirty when in use. They become ornamental, instead of unsightly, if moulded in lacquered metal tubes, or in seamless oval metal boxes, with the label printed on the metal.

As a change from the old-fashioned borax and camphor hair-cleaner a "Shampoo Powder" would probably be appreciated. It should be put up in envelopes, and wrapped in decorated tin-foil. The formula is as follows:—

Shampoo Powder.

Pulv. boracis	ʒvj.
Sodæ calcinat.	℥j.
P. quillayæ	℥ss.
Perfume	q.s.

Misce.

This is sufficient to make 1 quart of shampoo fluid.

VENETIAN HAIR-DYE.—This is a very saleable article, and really answers the purpose. Pack in 2-oz. panelled bottles, wrap in enamelled Turkey-red paper, with outside label on tinted-green paper. Its composition is as follows (the carbonate of silver should be freshly precipitated from 30 grains of nitrate of silver and 50 grains of carbonate of soda):—

Argent. carb.	ʒss.
Liq. ammoniæ	℥ s.
Aq. rosæ ad	℥ij.

Misce.

DAMIANA EXTRACT.—The last article to be mentioned is one which in certain districts will always have a large sale. It is for nervous debility, impotency, and impaired sexual powers: and being honestly a most valuable combination, will do the prescriber much credit. "Compound Extract of Damiana" should be put up in 3-oz. white square bottles, in case, and wrapped in bronze enamelled paper. Retail at 4*s.* 6*d.* It is composed of:—

Extract. damianæ liq.	℥xxx.
Phosphori (ethereal solution)	gr. v.
Tinct. nucis vomic.	ʒij.
Extract. cocæ liquid.	℥xxx.

Misce. *Dose.*—ʒij.

It will be noticed that all through the list of recipes now given great stress is laid on good wrapping-paper and tasteful labels. Both paper and labels will probably cost more than the ones in common use, but it will be found in practice that printers' ink and paper always pay their way. Many a chemist finds his own goods remaining on his hands simply because he will not go to the expense of putting them up in bright and attractive forms.

LABORATORY TABLES.

By D. B. Dott, Ph.C., F.I.C., F.R.S.E.

Though it has its drawbacks, there can be little doubt that the best material for a laboratory table-top is wood. Other materials may be better for special purposes, but for general use wood is best, and among woods teak is to be preferred. The wood ought never to be varnished or painted, as the action of alkalies and strong acids on the preparations employed renders the table unsightly. The now common custom of saturating the wood with melted paraffin is not open to the same objection, and has, indeed, many advantages. The paraffin renders the wood impervious to water, and, on account of its chemical indifference, it prevents the table being seriously attacked by sulphuric acid or caustic soda, which will sometimes be spilled even in the best regulated laboratories. Probably the chief objection to paraffin is that it melts and adheres to any warm vessel or apparatus that may chance to come in contact with it. In this way a new source of error is introduced into analyses, as the slight coating of paraffin on a capsule or crucible lid being invisible may be forgotten to be removed by ignition or otherwise before weighing. Of course, it is easy to say, "Never lay any vessel you intend to weigh on the table;" but a possible source of error is present all the same. My own view of the matter is, that for qualitative and general work it is well to have the tables paraffined, while for quantitative and finer work it is better to have the surface plain.

Slate is objectionable as a material for tables, firstly, because of its antipathy to glass vessels; secondly, because it is not readily pierced or cut; and thirdly, because it is cold to the touch and cold to look at. Yet it is the best kind of surface on which to place the combustion-furnace, air-bath, and similar apparatus. In like manner, although lead is not to be commended for general use, it is a good plan to have one table covered with it, and so arranged that any liquid falling thereon may collect at one end, and so be run off into the waste. All distillations should be conducted on this table, which is not only a convenient arrangement for getting rid of the water used in condensing, but is also a security against danger when working with inflammable liquids.

The attempt to convert each working bench into a sort of complete laboratory seems to me to be a mistake, however heretical this view may appear to some. To have tank water, distilled water, steam, gas, draught, and sink "laid on" at each bench produces an unnecessary and expensive complication of pipes; and the more pipes and stopcocks, the more plumbers and repairs. Simplicity is a great principle in the arrangement of laboratories, as in most other matters. All materials and apparatus required by each worker should be within easy reach, but not necessarily at his own particular table, which should, indeed, only be supplied with those requisites the absence of which would produce positive inconvenience.

A NEW (?) DISINFECTANT.—There is room for bromidine in the United States. Dr. Cyrus Edson has, according to the *Sanitary Plumber*, "newly discovered that a solution of bromine in water is a powerful disinfectant." The information comes a little late, and fortunately not by cablegram.

NO STARCH IN POTATO-STEMS.—It has recently been found from analysis of potato-plants that there is no trace of starch in the stem. Starch and sugar are readily convertible one into the other, so that it would appear that the starch of the leaves is converted into sugar, and as such passes down the stem, and is then re-converted into starch in the tubers.

"SANITAS."

CAUTION.—The fancy word "SANITAS" is our Registered Trade Mark.

THE BEST DISINFECTANT.

Non-Poisonous. Colourless. Gives no Stain. Fragrant.

Fluids (Fresh Water, Sea Water, and Crude); Oil; Emulsion; Insecticide; Powder; Sheep Dip; Hard, Soft, Animal, Brown Windsor, and Toilet Soaps; Soap Powder; "Sanitas" Disinfecting Jelly; Veterinary Ointment; Tooth Powder; Toilet Powder; Toilet Fluid; Furniture Cream; Antiseptic Gauze; Fumigators; Air Purifier and Urinal Tablets.

GOLD MEDALS, Calcutta, 1884, and Paris, 1885.

Liberal Terms, New Show Cards and Bills to the Trade.

Sole Manufacturers, **The "Sanitas" Co., Limited, Bethnal Green, E.**
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NOTICE.

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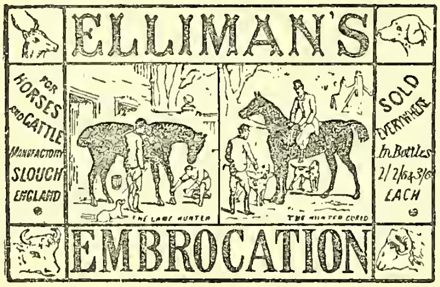
Apollinaris

"THE QUEEN OF TABLE WATERS."

ICED APOLLINARIS WATER.

"There is a popular but entirely mistaken notion that ice is in its nature pure and innocuous; it is on the contrary very apt to be impure and noxious, and may easily contain the germs of fatal disease."

"Apollinaris Water, by its absolute purity, affords complete guarantee against the dangers of zymotic disease incidental to ordinary drinking-water. Its sparkling and refreshing character renders quite unnecessary the introduction of ice into it. THERE IS, OF COURSE, NO OBJECTION TO ICING APOLLINARIS, AS CHAMPAGNE IS ICED, BY THE EXTERNAL APPLICATION OF COLD UNTIL ITS TEMPERATURE IS BROUGHT DOWN IN HOT WEATHER TO A PLEASANT COOLNESS. So treated, it is a beverage as refreshing and agreeable as it is pure and wholesome"



To Advertisers
CATALOGUES & PRICE LISTS ILLUSTRATED
Advert^t. Blocks Engraved in Best Style at Moderate Cost APPLY TO
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WOODHALL SPA

BROMO IODINE MINERAL WATER.

The strongest known Iodine Water in the World.

This remarkable Spa has been purchased by a Syndicate of gentlemen who have determined to make more widely known the extraordinary curative powers of this spring, which contains more Iodine and Bromine than any spring in Europe—"And, we may safely add, in any part of the World."—*Dr. Cuffe, for many years late resident Physician at Woodhall Spa.*

An analysis of the water having been made in November, 1886, by Professor Wanklyn, M.R.C.S., corresponding member of the Royal Bavarian Academy of Sciences, Professor of Chemistry, a very important discovery has been made, viz., the presence of Free or Elementary Iodine.

Dr. Wanklyn says—"So far as I am aware, this is the first instance in which free Iodine has been found in appreciable quantity in a natural water. For many years the Woodhall Spa has been celebrated as a valuable remedy in skin diseases. The fact that it is a solution of free Iodine is interesting in this connection, and well worthy of the attention of the medical profession."

The Woodhall Bromo Iodine Water is now being bottled at the Spring by the Sole Agents, BROMLEY & CO., Chemists, 233 High Street, Lincoln, 5 & 6 The Grove, Buxton, and at Woodhall. All communications to be addressed to them at the Spa, Woodhall Horncastle.

SLACK & BROWNLOW'S COMPRESSED CHARCOAL FILTERS.

See Advertisement, page 31.

SILICATED CARBON FILTERS.
PATENT MOVABLE BLOCK

SEE ADVERTISEMENT, PAGE 31.

EDITORIAL NOTES.

THE YEAR'S LEGISLATION.

ALTHOUGH the greater part of the last session of Parliament was taken up with the discussion of two Acts of Parliament relating to Ireland, we do not think it necessary to devote any space to those: those who feel any interest therein have doubtless informed themselves thereon from the reports in the daily papers. There have been, however, a few alterations in the law which have not come so prominently before the public, although some are of considerable importance.

The disability of the police to take part in political events has been so far removed that those of them who would otherwise be qualified to have their names placed upon the register of parliamentary electors will now be entitled to this privilege, and to vote in the same manner as other persons; with the additional privilege of being allowed to vote at the most convenient booth with reference to the duty on which they may respectively be engaged on the election day, on obtaining a certificate from the chief constable.

The Customs and Inland Revenue Act was not very sensational; nevertheless, it was satisfactory to have one penny in the pound taken off the income tax. Some alterations were made in respect of the tobacco duties which are supposed to be generally acceptable to the manufacturers thereof. The stamp duty upon any sea insurance policy where the premium does not exceed half a crown per cent. was reduced to one penny. And some slight alterations were made as to composition for stamp duties.

The Quarry Fencing Act provides for the safety of the public when strolling upon unenclosed land near a public highway, by requiring every quarry within fifty yards of a highway or place of public resort, if in unenclosed land, to be reasonably fenced for the prevention of accidents. This Act will come into operation on January 1, 1888.

Many complaints have been made respecting the hardships inflicted upon tenants whose landlords undertake to have them supplied with water by the cutting off of the supply in default of payment by the landlords according to the scale charges for the same. In future, the water companies are not to have power to discontinue the supply in such circumstances; but the unpaid water rent is to become a charge upon the property with interest at five per cent.; or the company may take proceedings against the owner for recovery of the amount, or may cause a demand note to be served upon the occupier, and then proceed to recover the amount from him.

The Probation of First Offenders Act is intended to meet the objection of sending a boy who has offended against the law for the first time to prison where he would be in danger of contamination with habitual criminals. It applies only to cases where the punishment could not exceed two years' imprisonment and no previous conviction is proved against the offender. In any such case the Court may direct that he be released on his entering into a recognisance, with or without sureties, and during such period as the Court may direct, to appear and receive judgment when called upon, and in the meantime to behave well. He may also be required to pay the costs or some part thereof by instalments. In case of any further offence within the period limited, the offender may be brought up on warrant and sentenced for his original offence, besides being dealt with in the ordinary manner for any other offence proved against him. Either the offender or his surety must have a fixed place of abode or regular occupation, or the Act will not be available for his release.

The Allotments and Cottage Gardens Compensation for Crops Act provides for the recovery by a tenant from his landlord, after the end of the present year, of compensation in money for crops, including fruit growing, upon his holding, and for labour expended upon and for manure applied to the land since the taking of the last crop therefrom, in anticipation of a future crop; and also for certain improvements if made by the tenant with the previous consent in writing of his landlord. The holdings, however, to which the Act applies are only allotments under two acres in extent and cottage gardens. Where the allotment is not held with a cottage as the garden thereof, it must be cultivated either as a garden or as a farm, or partly in one way and partly in the other. Provision is made for a simple and cheap mode of valuation in case the parties do not agree upon the amount of compensation to be paid. Any amount payable by the tenant to the landlord for rent or breach of agreement is to be deducted from the amount of the compensation.

The Markets and Fairs Act requires the market authority in all cases where tolls are taken to provide accommodation for weighing cattle, and some person to attend thereto; except in case of small markets where exemption may have been obtained on application to the Government Local Board. The Act comes into operation from its date, except that no penalty for neglecting to provide the required accommodation can be recovered in respect of any omission before January 1, 1888. After that date, taking toll where the Act has not been complied with will subject the market authority to a penalty not exceeding five pounds. Small fees are prescribed for weighing, and any fraud or other misconduct is to subject the weigher to penalties.

The Margarine Act will come into operation with the new year. This Act has been much discussed in the daily papers as well as in Parliament. In its final form the offence of selling anything for butter, unless it is made exclusively from milk or cream, or both, with or without salt or other preservative, and with or without the addition of colouring-matter, is made punishable with a fine not exceeding 20*l.* for the first offence, 50*l.* for the second, and 100*l.* for any subsequent offence. The substance hitherto known as butterine is after the date aforesaid to be called margarine, and every package containing the same is to be branded or durably marked with that word on the top, bottom, and sides in printed capital letters not less than three-quarters of an inch square. When it is exposed for sale by retail there must be a label clearly visible to the purchaser upon every parcel thereof in similar letters not less than one and a half inches square, and if sold without a branded package it must be wrapped in paper bearing the name printed in capital letters not less than a quarter of an inch square. A person purchasing with a written warranty, if prosecuted, may give notice of special defence, relying upon the warranty and upon the absence of any reason to believe that the substance sold was other than genuine butter, and if the decision should be in his favour after giving such notice he would be absolved, but neglect to give such notice would subject him to payment of costs, even if acquitted. The Sale of Food and Drugs Act is modified to this extent with respect to proceedings under this Act, that is to say, an authorised officer may take samples of butter or substances purporting to be butter without going through the form of purchase thereof. Manufactories of margarine are to be registered with the local authority, and all margarine forwarded by public conveyance is to be consigned as margarine.

By the London Parks and Works Act, the management of certain parks, &c., is transferred from the Government to the Metropolitan Board of Works, so that the expense of the maintenance thereof will in future be borne by the ratepayers of the Metropolitan district. This applies to Victoria Park, Battersea Park, Kennington Park, Bethnal Green Museum Garden, Chelsea Embankment, and Westminster Bridge. The date of transfer is fixed for November 1.

By the Truck Amendment Act, the provisions of the Truck Act are extended to all workmen as defined by the Employers and Workmen Act, instead of being confined as hitherto to certain specified trades and businesses. But with respect to agricultural labourers, a contract for giving him food, non-intoxicating drink, a cottage or other allowances or privileges in addition to money wages, is made legal by way of exemption from the general provisions of the Truck Acts. Where it has been agreed or is customary for a workman to receive advances on account of his wages, nothing is to be deducted by way of discount or otherwise. Any condition as to the place where a workman is to spend any part of his wages is illegal. An employer may deduct school fees and pay them on behalf of any children of his workmen; but no deduction must be made for sharpening or repairing tools except by agreement, not forming part of the condition of hiring. Deductions made from the wages of any workmen for any authorised purposes are to be accounted for once at least in every year, and submitted with vouchers to two auditors appointed by such workmen. A person engaged in the same trade as an employer charged with an offence under the Act is not to hear the charge as a justice of the peace.

Two Acts were passed relating to savings banks. By the first, additional powers are given to the Postmaster-General for making regulations with respect to post office savings banks, but without altering the present restriction as to a depositor not having two accounts. Power is also given to the Treasury to make certain regulations applicable also to trustees savings banks. By the second Act power is given to the Treasury to apply to the court for an examination into the affairs of any trustees savings bank on the representation of depositors or of the Commissioners for the Reduction of the National Debt. The court may thereupon appoint a commissioner to hold a local inquiry and to report thereon. It is obvious that if the powers given by this Act had been available in some past cases much loss might have been avoided.

The Allotments Act casts upon the sanitary authority the duty of providing allotments for the labouring population of their district where such allotments cannot be obtained on reasonable conditions by voluntary arrangement between owners of land and persons wishing for allotments. The Act may be applied in any district after consideration of a representation by six registered parliamentary electors resident in an urban district, or in some parish in a rural district. The requisite machinery is provided, but the space at our disposal will not admit of details. This Act, like the Compensation for Crops Act and the Fencing of Quarries Act, applies to England only.

The Acts specially applicable to Scotland relate to the law of Procedure in Criminal Cases, to the powers of Trustees, the proceedings before the Crofters Commission, the Closing of Public-houses, the Commissioners in Lunacy, consolidation of the law relating to Public Libraries, Valuation of Lands, and the Secretary for Scotland, to whom the powers and duties of the Home Secretary are transferred so far as relates to Scotland.

NOTES ON THE UNOFFICIAL FORMULARY.

I.—The Hypophosphite Preparations.

We propose to devote a few articles of a critical and suggestive character to the more important preparations of the Unofficial Formulary, the first group which we have to comment upon being the three syrups and one solution of hypophosphites. This group is a typical example of remedies which have become exceedingly popular during the last twenty years. The hypophosphites of calcium and soda were first officialised in the Additions to the Pharmacopœia of 1867, and it was generally anticipated, before the publication of the last edition of the Pharmacopœia, that some preparations would be introduced. But nothing was done, and it has been left to the Unofficial Formulary Committee to supply the want. The *Liquor ferri hypophosphitis compositus* is a preparation which was introduced by Dr. Frederick Churchill early in 1878. It is somewhat remarkable that Dr. John Churchill, many years before, called attention to the use of hypophosphites in the cure of consumption, and his various syrups, in 4*s*. 6*d*. bottles, have long been in regular demand. Dr. Frederick Churchill gave the percentage composition of his *liquor*, but did not say how it should be made. Mr. Adam Gibson supplied a formula, in which he made the hypophosphites of soda, iron, and magnesium by double decomposition with hypophosphite of lime and the respective sulphates. It will be noticed that the unofficial formula directs the iron hypophosphite only to be made extemporaneously, and this is done by dissolving freshly precipitated ferrous carbonate in hypophosphorous acid. This avoids contamination of the solution with calcium sulphate, an objection which arose from Mr. Gibson's formula. The process which the Formulary Committee have adopted is superior to other methods for making a solution of ferrous hypophosphite. Syrups and liquors made in this way remain much longer free from deposit than when made by the sulphate method, and the proneness to formation of sulphuretted compounds which characterises the latter method is done away with. In several respects the details of the formula require modification. In the first place the carbonate of sodium is much in excess. The amount of carbonate required to decompose 240 grains of sulphate of iron is 246 grains. The excess may do no harm, but it does no good. Then hot water is not directed to be used to dissolve the sulphate and carbonate; cold solutions give a mixture which filters very slowly, so that oxidation is greatly favoured. The best plan is to dissolve each salt in half a pint of boiling water (the iron solution is the better for a few drops of dilute sulphuric acid to make it clear) pour the soda solution into the iron solution, stirring constantly, cover, and allow to settle; then decant the supernatant liquor, throw the precipitate on a filter, and wash with hot water. We question if the addition of sugar to the wash-water is an advantage. The formula directs the washed precipitate to be transferred to the solution of the alkaline hypophosphites, but this is somewhat clumsy; it is better to dissolve it in the acid and 3 oz. of water, then mix this solution with the other, filter, and make up to a pint with water. In Churchill's own *liquor* there was 1 grain of free hypophosphorous acid in each fluid drachm, but the Formulary provides only for a fifth of a minim, nearly four-fifths of the acid being taken up by the iron. This is rather an improvement so far as taste is concerned.

The formula for *Syrupus calcii, manganesii, et potassi hypophosphitum* is one which we can say little good of, although with a slight modification an excellent syrup can be made from the ingredients. The weak point in the formula is the direction to dissolve the solids (640 grains) in 4 fluid oz. (1,750 grains) of boiling water. This on the face of it is a mistake. The solubility of calcium hypophosphite in boiling water is 1 in 6 (the B.P. erroneously states that this is the factor for cold water, whereas 1 in 6·8 is more correct). The ratio between 320 grains of this salt and 4 fluid oz. of water is as 1 to 5·47, so that if we were to omit the other salts we would yet fail to effect complete solution, and we find this to be the case in practice. The formula has been slightly amended in the second edition of the Formulary, the word "filter" being inserted after "dissolved"—surely it is not meant to filter out the undissolved hypophosphite! We have succeeded best by adding the syrup (hot) to the mixture of water and hypophosphites, but even thus there is slight crystallisation when the syrup cools. The easiest method is to dissolve the hypophosphites in 10 oz. of boiling water, filter, and dissolve 10 oz. of sugar in the filtrate, strain, and add syrup to make 1 pint.

Apparently the Committee had not quite decided which method is the better for making ferrous hypophosphite, for the formula for *Syrupus ferri hypophosphitis* incorporates the sulphate method. The result is that we have a syrup which begins to deposit within a few hours after it is made, and the Committee recognise this fault by directing the syrup to be "syphoned off bright when required." Besides this, there is the more serious objection that the syrup is apt to acquire a sulphuretted odour, owing to the ferrous hypophosphite solution being made in the cold; moreover, calcium hypophosphite is ordered 22 grains in excess of what is required to decompose the ferrous sulphate, and this excess (fully 1 grain to the ounce) is contained in the syrup. A better method would be to make the ferrous hypophosphite solution from the precipitate afforded by 240 grains of sulphate of iron, and 246 grains of carbonate of sodium; this should be dissolved in a mixture of hypophosphorous acid 1 oz., and water 2 oz., the solution filtered and added to 17 oz. of syrup. The product will contain $1\frac{1}{2}$ grain of ferrous hypophosphite and a little free acid in each fluid drachm. We presume that $1\frac{1}{2}$ grain to the drachm was intended, although 1 grain is the generally recognised strength, and it would be better if it were kept at that. The compound syrup of hypophosphites is an easily-made preparation, containing in each fluid drachm $\frac{3}{4}$ grain of ferrous, $\frac{1}{2}$ grain of calcium, and $\frac{1}{4}$ grain each of manganese and potassium hypophosphites, with the fractions of alkaloids. Otherwise it possesses the objections of its component syrups, and if these objections were removed we should have as nice a compound syrup as could be desired.

THE ADVANCE IN EAU DE COLOGNE.

By no means the least of the effects of the new German Spirit Law upon the drug trade in this country has been the rush for eau de Cologne on the part of the British dealers in in that commodity. During the present month orders have been pouring in at a rate which, the agents for Cologne houses say, has been unprecedented, and it would appear as if the principal manufacturers in Germany will have their resources taxed to the uttermost in order to satisfy the unusual demand which has set in. The German Spirit Law was passed on June 24 last, and will come into operation on October 1. Although the measure has excited an amount of interest in this country such as is rarely accorded to German legislative enactments, its provisions are but imperfectly understood. This may be partly explained by the fact that the details of the law as regards the exportation of alcohol from Germany are not yet quite settled, but are to be the subject of special regulations later on. The German exporters themselves are therefore uncertain how the new measure will affect their foreign trade. Meanwhile the principal eau de Cologne manufacturers in the country have advised their London agents that from October 1 they will raise the price of the usual size of eau de Cologne 1*s.* per dozen 4-oz. bottles, and a further advance will not improbably occur later on. It is this uncertainty regarding the future of the article which has caused the present phenomenal demand, traders being of course anxious to lay in a heavy stock of a preparation which is extremely likely to advance in price considerably during the next few months. At the same time it must be borne in mind that it is probably in the interest of the eau de Cologne makers to book for export as large a quantity as possible before October 1, because the new law, in addition to trebling the duty, and therefore also the drawback, paid by the distiller on his mash tun, introduces a surcharge of 30 marks per 100 litres on all spirits in stock on October 1, and of 60 marks on everything manufactured after that date. The best German eau de Cologne is manufactured with French spirit of wine, the import duty upon which in Germany was raised on June 26 last to 180 marks per 100 kilos., the reason for the premature imposition of this enhanced duty being to prevent the swamping of the German markets, between the passing of the spirit law and its entering into operation, by foreign spirit paying a low rate of duty. The wholesale price of high-class eau de Cologne in bond at London will be from the first of next month about 13*s.* 6*d.* per dozen 4-oz. bottles, but the rise in spirituous preparations for consumption in Germany itself has been far greater than that on the same class of goods intended for export. Alcohol in Germany advanced in a few weeks from 40*s.* to 70*s.* per 100 litres, equal to a rise from 1*s.* 10*d.* to 3*s.* 2*d.* per gallon, and we understand that the price of eau de Cologne for consumption in that country will be increased on October 1 by something like forty per cent. It is therefore in the first place the German consumers themselves who will have to pay, and rightly so, the increased taxation which the military expenditure of the Empire has rendered necessary. To throw upon exported spirituous preparations a burden as heavy as that imposed upon those consumed at home would of course seriously hamper a thriving German export trade. It cannot be said with precision how much eau de Cologne is annually imported into this country from Germany, but a tolerably accurate estimate may be obtained from the official statistics relating to the commercial movement in "perfumed spirits." These figures show that in 1885 we received from Germany and Holland 26,050 gallons (value 40,479*l.*) of perfumed spirits, which in this case may be taken as virtually identical with eau de Cologne. The imports from Holland may be taken as of German origin, most of the Cologne water being exported viâ Rotterdam. From the Channel Islands we imported in the same year 1,380 gallons (value 2,118*l.*) of "perfumed spirit," presumably also nearly all "eau de Cologne," while from other countries, principally France, the imports were 17,815 gallons, of a value of 38,669*l.* But eau de Cologne probably did not form any appreciable proportion of the latter item. Of the total imports, however, only 26,479 gallons (yielding a revenue of 22,221*l.* to the Customs) were consumed in this country. If we estimate three-fifths of this quantity to have consisted of eau de Cologne, it would follow that the consumption in Great Britain of that most favoured of all perfumes is 15,888 gallons per annum, or about one gallon for every 2,200 inhabitants. A large proportion of the perfumed spirits sent to this country is again exported, Australasia and British India taking nearly the whole between them, and from the official returns it can be proved without difficulty that the average consumption of eau de Cologne in Australia is many times larger than in this country, the re-exports from Great Britain alone being one gallon per 1,100 inhabitants, while a large trade is admittedly done directly from Germany. The eau de Cologne trade in Jersey is not likely to benefit much by the new German law so long as the manufacturers in Cologne are not compelled to raise their prices to such an extent as to render them out of all proportion to the non-German article, and even then the German trade is not likely to suffer total extinction, as the reputation of the large Cologne manufacturers is too well established to be successfully assailed. It is doubtful whether any article of commerce of the same proportion has given rise to so many lawsuits as the eau de Cologne industry generally, and more especially the respective degree of "genuineness" of the countless "Farinas" who are engaged in the manufacture of the perfume. In the early years of the present century Cologne numbered sixty makers of the perfume, most of whom carried on business under the style of "Farina," having secured a bogus partner of that name in Italy, where in some provinces the patronymic is almost as common as are Brown, Jones, or Robinson in this country. A poet of the period went so far as to assert that—

> . . . Chaque jour le Rhin vers Cologne charrie
> De nombreux Farina, tous "seuls," tous "Jean Marie";

a verse which might be rendered in doggerel English as follows:—

> The Rhine towards Cologne does every day carry a
> Number of Farinas, each "genuine John Maria."

The export trade in eau de Cologne is said to date from 1760, when, during the Seven Years' War, the French temporarily occupied Cologne. They carried away samples of the perfume to their own country, where it became very popular. At present Great Britain and the United States are the best foreign customers for the article.

The Opium Trade in Tonquin. Thirteen months ago particulars reached this country of a commercial treaty concluded between France and China, represented by M. Cogordan and Li Hung Chang, relative to the trade of Tonquin. By the terms of that treaty China prohibited the admission of opium from Tonquin, a decision which was a great blow to the hopes of many French capitalists who dreamed of destroying the Indian opium trade. Although the negotiations had been proceeding for a whole year, the treaty met with so little favour in France that ratification was refused. M. Cogordan was recalled, and M. Constans sent to Pekin to endeavour to obtain better terms for his countrymen. Negotiations were at once reopened, and after twelve months' work he has succeeded in obtaining a treaty the main provisions of which are just to hand. An important alteration in the treaty proposed by M. Constans was that the clause prohibiting the trade in opium between Tonquin and China should be withdrawn. This prohibition, inserted by the Chinese in the original treaty, has been a very sore point with the French officials and merchants. It was hoped that, besides growing the poppy in Tonquin and preparing the drug so as to compete with Patna and Malwa opium, it might be imported from Yunnan in a raw state, be prepared in Tonquin under French superintendence, and then be exported to China. The object of the Chinese in the original treaty was clearly to protect the native production, and not at all from any regard for the Indian trade. The French envoy has succeeded in this part of his task; the trade in opium is to be allowed. But the production of opium in Tonquin is still *in nubibus*, and when it does come into existence it will probably compete with native and not with Indian opium. The enormous initial duty leviable on foreign opium, under the Marquis Tseng's convention, would be an almost prohibitive tax on a new and struggling trade. Whether opium when produced in Tonquin can bear up against it is a question for the future.

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Alien labour in America. A very pretty labour dispute, in which the firm of Parke, Davis & Co. figured prominently, has just occurred at Detroit, in the United States. The quarrel was based upon a law known as the Alien Labour Act, passed by Congress in 1886, and making it unlawful for employers of labour in the United States to engage aliens in their service, persons residing abroad, and to pay their travelling expenses to America. Contracts made under those conditions are illegal in America, and the contractor is liable to a penalty of \$1,000 for each offence. The law is framed, of course, in the interests of American workmen, and their local labour organisations, which are very powerful, take care that it is vigorously enforced whenever occasion arises. Now it appears that a company conducting some building operations at Detroit employed a body of workmen residing in Canada (from which Detroit is only separated by a river). These workmen were hired in Canada and imported expressly to do their work in the United States, in violation of the Alien Labour Act. The local labour organisation at Detroit, becoming aware of these facts, threatened to put the law into operation indiscriminately against all Detroit employers of foreign labour, and to proceed in the first instance against Messrs. Parke, Davis & Co., some of whose employés were also Canadians, and resident on the Canadian side of the river, in order to create a test case. The threatened firm, not wishing to be fined, perhaps, \$1,000 for each of their Canadian employés, dismissed the whole of the latter, whereupon certain Canadian journals attempted to get up an agitation against the Detroit house, and called upon Canadian houses to boycott their products. Some of the dismissed employés took the sensible course of removing to the American side of the border and qualifying for citizenship in the United States, whereupon Messrs. Parke, Davis & Co. re-engaged them without demur.

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Pepper Adulteration. The *Produce Markets Review* notes that the London deliveries of pepper have been 5,442 tons during the first thirty-five weeks of 1887, against only 5,013 tons in the same period of 1886. It ascribes this increase to the various prosecutions in the spring for the sale of adulterated pepper, and points out that the retail sellers are now on their guard, and hence the improved demand for real pepper. The wholesale houses are also taking steps in the direction of increased caution, by more careful selection, the rejection of doubtful samples, grinding their own pepper, &c. It is particularly satisfactory to notice that the adulteration of white pepper with long pepper appears to have received a very severe blow. Long pepper has fallen 20*s.* per cwt., or about one-third of its then value, since the spring, owing undoubtedly to the prosecutions for its use with white pepper. At the great fall that has taken place, its use with white pepper would give a profit of 6*d.* for every pound of long pepper that could be mixed with white pepper, so that the temptation to those fraudulently disposed is very great. Fortunately, however, the taste and smell of long pepper cannot be disguised, so that the adulteration is readily to be detected. As it is probable that the practice of adulterating pepper is as yet only dormant, and might very readily be revived, the actual cost of the lowest ground samples which the grocers could safely sell may be useful. The present market value of good heavy Penang, which is supposed to contain from 8 to 12 per cent. of dust, is $6\frac{7}{8}$*d.* to 7*d.* per lb.; and adding $\frac{3}{8}$*d.* per lb. for the cost of grinding, this would bring its present first cost to $7\frac{1}{4}$*d.* per lb. Those who bought a little time back can, however, sell with a profit at that quotation. The lowest cost of ground common white Penang, taken in the same way, is $10\frac{5}{8}$*d.* In this case the market is lower than it has been. It is also satisfactory to notice that the demand for genuine ground ginger is increasing since the recent prosecution for the use of spent ginger for adulterating pepper.

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Medicine-stamp Duty. The *Lancet* of last week gives special prominence to an article on the medicine stamp tax. The writer apparently is in a condition of extreme excitement, as may be judged from his statements. For example, he has arrived at the conviction that "simple quinine, made up into pills by means of sugar, gum arabic, glycerine, or other excipient [judging by the excipients which he names, our champion is not much of a pharmacist]; quinine pure and simple, enclosed in a capsule of gelatine or covered with sugar; rhubarb, made into a fluid extract or tincture by extracting its properties with alcohols; menthol, dissolved in spirit to form a solution; powdered rhubarb and soda triturated together are under certain conditions held liable," and chemists have been prosecuted for selling them. "The Board of Inland Revenue rule that the mixture or combination of any two or more drugs renders the mixture liable to the stamp tax, in each and every case where the medical properties are stated upon the label, or set forth in advertisements to the medical profession and chemists in medical and pharmaceutical journals. All compounds and mixtures of the Pharmacopœia come under this ban according to this arbitrary ruling, and the chemist vending is liable to a heavy fine if he states the medical properties upon the label, or in any advertisements to the medical profession or trade. The chemist may not dispense paregoric, tincture of arnica, or even syrup of squills, without placing upon them a Government stamp if he states upon the label the uses of these medicines." He then goes on to state that "drugs in their cruder state," such as "Peruvian bark or Jesuits' powder," are not liable, and argues from the contrast that the result is to "discourage the chemist in developing the manufacture of legitimate chemical and pharmaceutical preparations." This is a most ingenious argument, and ought to wring tears from the eyes of the Somerset House officials. After putting in a word for the poor, who are the special sufferers, the writer concludes by saying that "this iniquitous Act affords a sheltering guise beneath which dangerous poisons, which ought only to be administered under a physician's prescription or direction, can be placed freely within reach of the public. If for want of time the Government cannot take immediate steps to repeal the entire Act, they should, without a moment's delay, annul those clauses which apply to any and all medicines which do not come under the head of patent or secret compounds."

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WANTED, for a short time, a young man as DISPENSER to a Medical Man; no previous knowledge of dispensing necessary.—Address Y 56, *The Yorkshire Post*, Leeds.

Why Study? This advertisement appeared in the *Yorkshire Post* of September 13. Luckily the party is required for a short time only, but a very short time will suffice for the "young man with no previous knowledge of dispensing" to dispose of a number of Yorkshiremen.

⁂

Uprooting of Cinchona in Ceylon. The last issue of the *Tropical Agriculturist* contains correspondence concerning the quantity of cinchona trees now being uprooted in Ceylon, and the probable effect which the diminution of trees may have upon the shipments, and consequently upon the price of bark. According to a London firm of brokers only 1,029,000 lbs. of root bark was sold in London during the whole of 1886, which, taking the yield at only 1 lb. per tree, would account for barely over one million of trees out of a total estimated by them at fifty millions.

An analysis of the composition of Ceylon cinchona offered at the London public sales proves that the proportion of root bark, though increasing, is still very small, the figures being:—

	Renewed.	Natural stem.	Root.	Branch.
	Per cent.	Per cent.	Per cent.	Per cent.
1883 ..	16	30	3½	41
1884 ..	36	17	4	43
1885 ..	38	9	5	51
1886 ..	26	43	6¾	22

On the other hand, Messrs. Arbuthnot, Latham & Co., who are about the largest consignees of cinchona in London, estimate the number of cinchona trees in Ceylon at only 24,000,000, allowing an area of 16,000 acres, and an average of 1,500 trees per acre. Their estimate of the number of trees cut down in Ceylon from the beginning of 1883 until the end of 1886 is 2,596,332, is made up as follows:—

Year	Root offered at the auctions.		Say 350 lbs. each.	Say ¾ lb. root per tree.
	Pkgs.		Lbs.	Trees.
1883	928	equal to	232,000	309,333
1884	1,326	,,	331,500	442,000
1885	2,111	,,	527,750	703,666
1886	3,431	,,	857,750	1,141,333
	7,796		1,949,000	2,596,332

Whichever figures may be nearest the mark, it seems clear that the uprooting process has not been resorted to on a scale at all approaching the ideas of many London dealers.

⁂

Ipecacuanha Cultivation in India. In our issue of January 29 last, we called attention to the fact that at present we are entirely dependent upon South America for our supply of ipecacuanha, and that arrivals from that quarter are always liable to prolonged interruption on account of civil war, epidemics or other circumstances. We now learn that Surgeon-General G. Bidie, of the Madras Government, has addressed a letter to the Governor of Madras, calling attention to the article in our journal, and pointing out the importance of taking energetic measures to extend the cultivation of the ipecacuanha in India, in order to render that country, where the drug is very largely used, independent of the South American production. Dr. Bidie states from his own experience that the plant, although not difficult to propagate in India, is by no means easy of culture, and requires climatic conditions which can only be secured in a limited area. He thinks, however, that if the drug commands a price of about 4*s.* per lb. in London, the industry would be a remunerative one. Dr. Bidie's letter was forwarded by the Governor to Mr. M. A. Lawson, Government botanist and director of the Nilgiri cinchona plantations, who replied that since the beginning of 1886 he has been pushing forward the propagation of ipecacuanha as fast as possible, and that a great many plants were now ready to put down. Mr. Lawson has tried growing ipecacuanha in the Government gardens at Barliyár, but it does not thrive there, neither the climate nor the soil being suitable. The only place where the plants do well is in the Government teak plantations at Nilambúr; and he advises the Government to set apart a quarter of an acre in that forest to put out more plants.

Col. Campbell Walker, Conservator of Forests in Southern India, to whom the matter was also referred, stated that Nilambúr was the only place in India where he had known ipecacuanha to grow well; this, in his opinion, was not only due to suitable condition of climate and soil in that district, but also to the presence there of a competent resident agency, which was wanting elsewhere.

Both Mr. Lawson and Col. Walker are decidedly in favour of the extension of ipecacuanha culture in India, but the latter suggests that the Government should simply distribute plants free of cost, and leave the cultivation on a large scale to private enterprise.

Acting upon this advice, the Governor of Madras has issued an order directing the Government botanist to plant out at Nilambúr all the ipecacuanha plants which are ready for removal, and the forest officer to give Mr. Lawson every assistance in the cultural operations. The Governor expresses the hope that private enterprise will render it unnecessary for the Government to undertake the cultivation of the plant on any large scale, and intimates that the Government botanist will furnish information regarding cultivation to any parties who may apply to him.

⁂

Untrustworthy Gum Samples. At last week's gum sales the vexed question of "bulking" gums came up for discussion. The unfair, or rather slovenly, manner in which some of the public wharves draw samples of goods stored in their warehouses has long caused great irritation among wholesale traders who are in the habit, previous to the sales, of procuring samples of parcels about to be offered and submitting these to their clients for the purpose of obtaining orders or "limits," on the basis of which they can buy at the auctions. On this occasion Mr. W. J. C. Hendrey, of the firm of Donald Gray & Sons, initiated the discussion by adverting to the numerous complaints which he had lately received from his clients about the unreliability of gum samples. The proportion of dust in the lots alleged to be represented was often far in excess of that in the samples furnished by the wharves, and in one instance, Mr. Hendrey said, a parcel of Australian gum was found to contain about 10 lbs. weight of stones, while the sample had shown no such admixture. The reason for these discrepancies lies partly in the fact that the goods are not always bulked, *i e*, turned out of the original cases in a heap upon arrival at the warehouse, and partly in the negligence of the wharfingers, who, of course, find it much easier to draw a sample from the top of a package, where the best pieces are generally found, than from the centre or bottom, where dust and admixture frequently accumulate. Mr. Hendrey wound up by proposing a resolution to the effect "that in future all parcels of gum arabic brought to public sale shall be printed in the catalogue 'bulked' or 'unbulked,' and that the mode of sampling unbulked parcels be declared." The resolution, having been seconded by another broker, Mr. R. Dalton (Dalton & Young), was met by an amendment proposed by Mr. F. Fink (Fred Fink & Co.), and seconded by Mr. A. Ziegele (Albisser, Ziegele & Co.), declaring "that all gums offered in public sale should be bulked." This amendment no doubt represented the desire of a considerable section of the wholesale trade, and would, had it been adopted, have minimised the risk run by merchants on account of unreliability of samples. The fatal objection to its adoption was well expressed by Mr. Hovil (King & Hovil), who maintained that the increased charge to the shipper for bulking (which is absurdly dear in London) would drive away the gum trade from our market. After a brisk discussion *pro* and *con*, during which Mr. Figgis (Lewis & Peat) and Mr. Young (Dalton & Young) vainly endeavoured to persuade Mr. Fink to withdraw his amendment, the latter was put to the room, and lost by a large majority. The original motion, with a rider proposed by Mr. Green, "that all docks and wharves redrawing samples of gum shall be instructed 'to turn out the package and sample,'" was then declared carried *nem. con.*

Personalities.

Dr. W. Ostwald, of Riga, has been appointed Professor of Chemistry and Director of the second Chemical Institute of the University of Leipzig.

Dr. George Watt, C.I.E., has been appointed to the newly-created office of scientific assistant to the Revenue and Agricultural Department of the Government of India.

M. Pasteur explains that the death of Lord Doneraile and other of his patients from hydrophobia is owing to the delay in inoculation with the spinal virus, and too few inoculations after the first.

Mr. Henry Lewis Seymour, son of the late Mr. W. W. C. Seymour, chemist, of Middlesborough, having rescued no less than seven persons from drowning, has been presented by the inhabitants of Nechells, Birmingham, with a silver salver.

The following applications for Patents have been registered at the Patent Office.

Alkali Metals.—10,276.—July 22, 1887.—C. Netto. Preparation of sodium and potassium.——11,268.—Aug. 18, 1887.—G. A. Jarvis. Manufacture of sodium and potassium.

Bandages.—10,924.—August 9, 1887.—H. W. Sitwell, C. F. Sitwell, and J. Sitwell. Surgical water-bandages.

Beverages.—10,344.—July 25, 1887.—J. W. Horner. Manufacture of aërated beverages.——10,366.—July 25, 1887.—A. Manbré. The manufacture of condensed temperance or non-intoxicating beer worts.——10,447.—July 27, 1887.—A. Brin and L. Q. Brin. Producing pure oxygenated drinking waters.——10,845.—August 8, 1887.—T. Needham. A new beverage or candy.——10,890.—August 9, 1887.—By same. A new beverage.——11,230.—August 16, 1887.—By same. A new beverage.

Blue.—10,554.—July 29, 1887.—J. A. Walton. A liquid blue.

Bottles.—10,763.—August 5, 1887.—H. Lagee. Strainer bottles for medical, druggists', and other purposes.

Brushes.—10,308.—July 23, 1887.—E. V. Goad and E. Goad. Tooth-brushes and hair-brushes.——10,489.—July 28, 1887.—W. P. Thompson. A tooth-brush to brush the teeth in a vertical direction.

Brush Stands.—10,953.—August 10, 1887.—F. W. Warrick. Stands for tooth and nail-brushes alone, or with a receptacle for tooth-powder or the like.

Burns.—11,000.—August 11, 1887.—C. Schuttyser. A cure for burns.

Butter Testing.—10,801.—August 6, 1887.—W. Devoll. Apparatus for testing butter.

Compressing Chemicals.—10,305.—July 23, 1887.—Elizabeth H. Hutchinson. Compressing sea-salt and similar chemicals.——10,306.—July 23, 1887.—By same. Method of compressing solid and liquid disinfectants.

Cotton-seed Oil.—10,783.—August 5, 1887.—J. Sears. A compound preparation of cotton-seed oil.

Dentistry.—10,651.—August 2, 1887.—G. H. Jones. Manufacture of artificial teeth.——10,725.—August 4, 1887.—W. P. Thompson. Dental engines.——10,753.—August 5, 1887.—S. Mitchell and T. Robertshaw. Apparatus for administering nitrous oxide gas, or a mixture of nitrous oxide gas and ether.

Fly-papers.—10,781.—August 5, 1887.—S. Wilson. Fly-papers.

Lint.—10,291.—July 23, 1887.—C. E. Bennett and W. T. Browne. Machines used in the manufacture of surgical lint.

Lozenges (Medicinal).—10,367.—July 25, 1887.—E. Roberts. Manufacture of a medicinal lozenge.

Paint Cleaner.—11,068.—August 13, 1887.—J. J. Speakman. Compositions for use as paint restorers or removers.

Pepper.—10,994.—August 11, 1887.—A. Dunderdale. Extracting the black colouring-matter from pepper-corns and obtaining light-coloured pepper-corns thereby.

Perfumes.—10,864.—August 8, 1887.—E. Appleby. Automatic sale of perfumes and other articles, either liquid or solid, both on draught and in bottles.

Poison Stopper.—10,892.—August 9, 1887.—T. C. Lovewell and J. Yonge. A stopper which will prevent accidental poisoning.

Salol.—10,260.—July 22, 1887.—Carl Kolbe. Manufacture of salicylic esters, called "Salols."

Steamy Windows.—11,228.—August 17, 1887.—W. H. Blakeney and G. D. Macdougald. Apparatus for devapourising windows.

Surgical.—11,173.—August 16, 1887.—J. B. Hilliard. Appliances for correcting spinal curvature.——11,208.—August 16, 1887.—M. J. Roberts. Corsets for the relief of the deformed.

Syringes.—10,629.—August 2, 1887.—H. H. Lake. Improvements in syringes.

Trusses.—10,532.—July 29, 1887.—I. A. Best. Truss springs for hernia.

Vinegar.—10,346.—July 25, 1887.—J. F. Peasgood. A specially pure and acid vinegar.

Specifications of Patents recently published.

1886.

8,403. P. Everitt. Delivering liquid in exchange for coin. 8*d.*

8,442. F. Greening. Substitutes for indiarubber, varnish, &c. 6*d.*

10,955. J. I. Watts and W. A. Richards. Manufacturing, &c., sodium bicarbonate. 4*d.*

10,957. A. Nikiforoff. Producing benzol anthracene, &c. 6*d.*

11,057. E. Thompson and J. W. Dixon. Stands for bottles, &c. 8*d.*

11,169. J. Williamson. Filter presses. 8*d.*

11,304. C. Hird. Filters. 8*d.*

11,518. J. M. Collett. Sodium sulphites. 4*d.*

11,560. J. E. Quayle. Washing-powder. 4*d.*

11,816. A. and L. Q. Brin. Metallic oxides. 8*d.*

11,841. A. Blackie. Applying arsenic and sulphur for destroying parasites, &c. 6*d.*

11,995. W. G. Dunn. Baking-powders. 4*d.*

12,033. J. Shaw. Curing certain diseases. 8*d.*

12,408. P. Homero. Medicinal tea. 4*d.*

12,757. R. de B. Trotter. Cod-liver oil, &c. 6*d.*

12,817. A. C. Henderson (Morel). Gas injectors for pulmonary complaints. 8*d.*

14,344. J. W. Kynaston. Chlorate of potash. 6*d.*

1887.

1,748. J. Stewart. Mounts for artificial teeth. 8*d.*

6,209. R. L. Hicks. Combining disinfectants with soda crystals. 4*d.*

6,518. B. Weale and others. Curative oil mixture. 4*d.*

7,073. W. Edge. Blue or other colour packages. 6*d.*

7,524. H. H. Lake (Perkins). Pigment or paint. 6*d.*

7,532. A. J. Marston. Surgeon's combined chair and table. 8*d.*

7,534. R. M. H. Hicks. Composition for healing wounds, &c. 4*d.*

7,830. W. Macnab and others. Separating by subsidence solid matters from liquids. 8*d.*

7,915. R. Harrison. Surgical truss. 6*d.*

8,008. T. A. Marshall. Farinaceous food. 4*d.*

8,013. E. De Pass (Rougeot). Feeding-bottles. 11*d.*

8,503. C. B. Harness. Surgical trusses. 6*d.*

8,549. D. L. Snediker. Abdominal supporters. 6*d.*

1876.

193. W. Little. Sheep wash (new edition). 4*d.*

The following Patents have become void through non-payment of renewal fees:—

1883.

1,112. G. De Vigne. Ferrocyanides.

1,163. J. T. Dann (Wartmann). Treatment of pulmonary affections, &c.

1,224. E. M. Bourjeaurd. Truss for hernia.

1,554. C. D. Abel. Liquid compound for preventing combustion.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

GAS-LEAKAGES.

PAPER saturated with a solution of chloride of palladium has been recommended for detecting gas-leakages. The paper must be used wet. In the case of street mains pieces of it are placed in iron pipes ($\frac{1}{2}$ in. diam.), and these inserted at intervals in the vicinity of the leakage. The gas reveals itself by colouring the paper brown or black.

ARSENIOUS IODIDE.

THIS compound, now official in the British Pharmacopœia, may, according to Schneider (*Journ. pro Chem.*), be prepared by heating realgar with iodine in the proportion of 1 molecule of realgar to 6 atoms of iodine. Arsenious iodide and sulphur are formed. The iodide being soluble in water may be separated from the sulphur by that solvent, and obtained in crystals by concentration.

ALUM IN FLOUR.

A SIMPLE method for detecting alum in flour has been proposed by J. Herz (*Ding. Poly. Jour.*). Quarter fill a glass cylinder with the flour, and dampen it with water, add a little alcohol and 2 drops of fresh tincture of logwood (1 in 20), then fill up the cylinder with saturated solution of common salt. A violet red colour is imparted to the salt solution with a flour containing 0·01 per cent. of alum, and a blue colour with flour containing between 0·05 and 0 1 per cent. of alum. The colour is permanent for several days. The actual percentage may be determined by comparison with mixtures of known alum content.

JEQUIRITY SEEDS.

AT a recent meeting of the Royal Society a paper was read on the proteids of the seeds of *Abrus precatorius* by Dr. Sidney Martin. The author stated that two proteids were found in the saline extract of the crushed seeds; one a *globulin*, identical with that occurring in papaw-juice, and belonging to the group of vegetable paraglobulins; the other an *albumose*, identical with what the author has described as α-phytalbumose in the papaw-juice. Attention was called to the differences between the class of vegetable paraglobulins and the vegetable myosins, which differ in the fact that the latter become readily changed into an albuminate when the sodium chloride holding them in solution is dialysed away.

SYNTHESIS OF STYROLENE.

MM. VARET AND VIENNE, in a recent number of *Comptes rendus*, state that by passing a current of acetylene through 200 grammes of benzene containing 50 grammes of aluminium chloride for 30 hours the oily liquid remaining after removal of the unaltered aluminium chloride by washing was found to yield, on fractional distillation, three distinct products. The first, which came over between 143° and 145°, and which amounted to 80 per cent. of the whole, consisted of pure cinnamene or styrolene ($C_6H_5.CH.CH_2$), which is one of the principal constituents of liquid storax, and was synthetised by M. Berthelot by passing acetylene and benzene vapour through a tube heated to redness. The second fraction, coming over at 265°–270°, consisted of diphenyl ethane ($(C_6H_5)_2\ CH.CH_3$); and the third fraction, boiling at 280°–286°, was found to consist entirely of dibenzyl ($C_6H_5.CH_2.CH_2.C_6H_5$), a solid substance isomeric with diphenyl ethane. These syntheses afford another instance of the singular action of aluminium chloride in attacking the benzene nucleus.

SPIRITUS ÆTHERIS NITROSI.

IT has long been stated in text-books that oxalic acid is one of the products of the action of nitric acid on alcohol in the process of making spirit of nitrous ether. Conclusive evidence of this has, however, been wanting, so that the results recorded by H. Frickhenger (*Arch. der Phar.*) are of interest. Spirit of nitrous ether is ordered by the German Pharmacopœia to be prepared by treating rectified spirit (sp. gr. ·832) with nitric acid, and distilling. A considerable portion remains in the still, but if alcohol of sp. gr. ·812 is used, nearly the whole of the contents of the still distills, and the distillate is much freer from acid than when the weaker spirit is used. The residue in the still amounts to 2 per cent. of the original charge; it is yellow in colour, and is strongly acid, but does not contain nitric acid. The acidity was found to be due to the presence of oxalic acid in large quantity, and the author suggests that it should be utilised.

[It does not seem probable that oxalic acid is formed in the B.P. process, there being free sulphuric acid present from beginning to end of that process. We have failed to detect oxalic acid in the residue.—ED.]

SYNTHESIS OF JUGLON.

ANOTHER synthesis of a natural product has just been added to the long score of successes which have followed Wöhler's initiative. About a dozen years ago it was observed that the outer coatings of walnuts collected at the end of June became covered with small yellow needle-shaped crystals, of a substance which was found by Vogel and Reischauer in the expressed juice of the same, and named by them nucine or juglon. Bernthsen and Semper have very recently (*Ber. Deut. Chem. Ges.* 1887, No. 6) proved conclusively that this substance is an α-hydroxy-α-naphthoquinone, $C_{10}H_5O_2(OH)$, and to complete the proof have actually built up the same substance directly from naphthalene. They first prepared $\alpha_1\ \alpha_3$ dihydroxynaphthalene, $C_{10}H_6(OH)_2$, by Armstrong's method, which was then oxidised by chromic acid; the brown precipitate obtained was afterwards digested with warm ether, and after removal of the ether by distillation, crystallisation from chloroform yielded beautiful acicular crystals identical in all respects with juglon, of nutshell odour, producing violent sneezing. As naphthalene itself can be built up from its elements, it follows that juglon, undoubtedly a product of vegetable growth, has been synthetised by artificial means.—*Nature.*

ECGONINE.

THIS decomposition-product of cocaine was first discovered by Merck, who assigned to it the formula $C_9H_{13}NO_2$. Alfred Einhorn has examined the body, and has ascertained that it is anhydrous ecgonine, the latter having the formula $C_9H_{15}NO_3$. Merck's body he therefore calls anhydroecgonine. Working with it he obtained a hydroiodide, having the formula $C_9H_{13}NO_2HI$. This, when heated with water and treated with silver oxide to remove free iodine, gave a solution which yielded crystals of the hydrate—*i e.* ecgonine—having a melting-point of 235° C. The hydrobromide and hydrochloride were also obtained, and were found to be isomerous with the hydroiodide. An alcoholic solution of anhydroecgonine, treated with gaseous hydrochloric acid, yielded a body in which a hydrogen atom was replaced by ethyl, and whose hydrochloride was crystalline, its formula being $C_9H_{12}NO_2.C_2H_5HCl$. Judging from these and other results, the author concludes that ecgonine is methyltetrahydropyridylbetaoxypropionate, and that the following represent the constitution of the various bodies named, viz.:—

Anhydroecgonine $C_5H_4N(CH_3)H_3 - CH = CH - COOH$.
Ecgonine.. .. $C_5H_4N(CH_3)H_3 - CH(OH) - CH_2 - COOH$.
Cocaine .. .. $C_5H_4N(CH_3)H_3CH(C_6H_5CO_2) - CH_2 - COOCH_3$.

ALCOHOL AND TURPENTINE.

IN a paper entitled "The Oxidation of Ethyl Alcohol in the Presence of Turpentine," communicated to the Chemical Society by Mr. C. E. Steedman, Williamstown, Victoria, the author states that dilute ethyl alcohol in the presence of air and turpentine becomes oxidised to acetic acid. He placed in a clear glass 16 oz. bottle a mixture of 2 drachms of alcohol, 1 drachm of turpentine, and 1 oz. of water; the bottle was securely corked and left exposed to a varying temperature averaging about 80° F. for three months; at the end of that time the liquid was strongly acid from the presence of acetic acid. One curious fact appears to have light thrown upon it by this observation. Mr. McAlpine, Professor of Biology at Ormond College, Melbourne University, has a method of preserving biological specimens by abstracting their moisture with alcohol after hardening in chromic acid, and then placing the specimen in turpentine for some time; great discrepancies arise, however, according as the alcohol is allowed or not to evaporate from the specimen before dipping it into turpentine.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 Cannon Street, E.C., September 22.

There has been a decided improvement in the volume of business which has been transacted in our market since our last report, although there are no striking incidents to report. In heavy chemicals soda nitrate, cream of tartar, and lead acetate are dearer, but sulphate of copper has somewhat declined in price. Quicksilver and borax remain steady. Citric and tartaric acids, especially the latter, are weaker, as are also the iodides, potassium iodide being offered at a decline of 3*d.* per lb. Quinine remains very weak, and a further fall in our cinchona market seems not unlikely. At to-day's auctions musk and senna sold at decidedly dearer rates, but cardamoms, ipecacuanha, Curaçao aloes, and ipecacuanha were weaker; oil of peppermint is also quoted lower. Soy, jalap, and tolu balsam seem likely to advance further. At the shellac sales a slight rise in second orange lac was established, but button went from 2*s.* to 3*s.* cheaper. Olive oil may shortly see higher prices. In spices, pepper, pimento, chillies, and cochin ginger have advanced.

Acid (Citric).—The shipments are fairly good, but they consist almost entirely of acid bought for "forward delivery." There being no orders to test the market, the price is nominal at 1*s.* 8¼*d.* to 1*s.* 8½*d.* per lb.

Acid (Tartaric).—The market is somewhat weaker; *Foreign* cannot be quoted over 1*s.* 6¼*d.* to 1*s.* 6⅜*d.* per lb., while *English* acid might probably be had at 1*s.* 7*d*, perhaps even a fraction less.

Aloes.—*Cape* aloes are very neglected, and owners would probably not be unwilling to make certain concessions. The 94 cases offered to-day included a fair proportion of very good, hard aloes, but the whole was bought in at from 24*s.* to 32*s.* per cwt. nominally; 26*s.* was suggested for good quality. Of *Curaçao* aloes 924 packages (mostly small gourds) were placed in auction. The bulk was sold at very low rates; good Capey at 26*s.* 6*d.*; fair to ordinary ditto at 23*s.* 6*d.* down to 12*s.* per cwt. *East India* aloes quiet. Twenty-five kegs good soft brown *Socotrine* sold at 6*l.* 15*s.* per cwt.

Ambergris.—One tin, rather weak in flavour, sold at 79*s.* per oz.

Anise.—Twenty bags *Russian* seed, dusty and mixed with stones and other seeds, were taken out, while 28 cases Chinese *Star anise*, genuine but very mouldy, were bought in at 70*s.* per cwt.

Annatto.—Not much doing. For good, bright Pará *Roll* 1*s.* 6*d.* per lb. is asked. At the auctions one case good, bright Ceylon *Seed* sold at 3*d.* per lb.; 19 bags *Seed* from Java were bought in at 3*d.* to 3½*d.* per lb.

Balsams.—*Canada* is still quoted at 1*s.* 9*d.* for fine quality. Some pale thin *Copaiba* (Pará) was again offered, and bought in at 1*s.* 9*d.* per lb., being more than the present market value. *Peruvian* balsam quiet, and not in much demand; 4*s.* 6*d.* per lb. is still asked for good thin quality. *Tolu*, the American market having advanced, has found much more attention here. Privately 1*s.* 6*d.* per lb. has been paid here this week. At the auctions none was sold. Several parcels here and on the Continent have been bought up for New York. The position of the article is considered a sound one.

Borax.—From Germany we hear that the demand continues to be good there, but the London market has undergone no change, and remains quiet.

Buchu.—Fifty-two bales were offered, mostly round leaves, rather yellow and stalky; 2*d.* was refused for these, while one parcel good greenish sold at 3*d* per lb.

Calumba sold at much lower prices to-day. For the auctions 963 bags were catalogued, which included a new lot of 386 bags of much better quality than has been offered at the sales for some considerable time. This lot was sold at the unprecedentedly low rate of 19*s.* to 21*s.* 6*d.* per cwt. for sound small to bold yellow root, somewhat mixed with dark, 18*s.* to 21*s.* for smaller and partly sea-damaged ditto, and 12*s.* for ordinary darkish. Another lot of low black and dusty root sold at from 8*s.* to 9*s.* per cwt.

Camphor.—Nominally the prices for *Crude* remain at 70*s.* for Japan, and 67*s.* 6*d.* for China; but at to-day's sales 25 tubs of the former variety, good quality if somewhat damp, sold cheaply at 66*s.* per cwt. The lot is too small, however, to establish a fall in price. *Refined* camphor is steady at the recent quotations.

Cannabis Indica.—Only 41 bales were offered at the sales, and none found buyers. Dark, slightly stalky, seedy tops bought in at 2½*d.* per lb.

Cantharides.—Fifteen cases *Chinese* flies, mostly old and very dusty, were all bought in, 2*s.* 1*d.* per lb. being refused for one lot. Of a parcel old and dusty, but good bright *Russian* flies, 3 cases were sold at 6*s.* to 6*s.* 2*d.* per lb., while a bid of 5*s.* 6*d.* per lb. was refused for another lot.

Cardamoms.—Prices were rather lower at to-day's auctions, especially for medium qualities, which occasionally sold about 3*d.* below valuations. Holders were generally disposed to sell, and the bulk of the 193 packages offered was quoted at following rates:—*Ceylon-Malabar* fine bold longish pale 2*s.* 4*d.* per lb. (2*s.* 2*d.* being refused for a lot of plump pods); medium to bold good pale longish 2*s.* 1*d.* to 2*s.* 3*d.*, ditto plump, rather light 2*s.*, fair pale slightly specky 1*s.* 10*d.*, pale medium size 1*s.* 9*d.* to 1*s.* 10*d.*, smaller ditto 1*s.* 8*d.*, fair yellow plump but sea damaged 1*s.* 7*d.*, yellow slightly specky 1*s.* 5*d.*, small ditto 1*s.* 4*d.*, small pale to fair brown mixed, partly damaged 1*s.* 2*d.* to 1*s.* 3*d.*, long, dull in colour 11*d.*, small pale 8½*d.* to 10*d.*, ordinary lots, mostly mixed with empty husks, down to 6*d.* per lb. 35 boxes *Aleppy* were bought in and a parcel of *Mangalore* MM upon M mark, but of indifferent appearance was bought in at 2*s.* 6*d*, only one box selling at 2*s.* 4*d.* per lb. *Seed* sold from 10*d.* up to 1*s.* 6*d.* per lb. The Ceylon exports between October 1 and August 25 give the following results: 1886–7, 302,066 lbs.; 1885–6, 220,178 lbs.; 1884–5, 133,963 lbs.

Chamomiles.—The feeling appears somewhat less firm, and there is not much business doing. We hear that 6*l.* 15*s.* per cwt. has been paid for new *Belgian* flowers, selected second pickings. No *English* chamomiles are offering. At auction 8 casks ordinary stalky single German flowers were taken out.

Cinchona.—A parcel of 113 bales genuine, soft, flat yellow *Calisaya* sold at to-day's auctions at very high rates, as much as 2*s.* 1*d.* per lb. being paid for good, but thin bark, and 2*s.* to 1*s.* 11*d.* for fair sound. Damaged lots sold from 1*s.* 11*d.* down to 1*s.* 7*d.* per lb. A parcel of spurious Calisaya was bought in at 6*d.* to 1*s.* 3*d.* per lb. *Maracaibo* old import sold at 3*d.* per lb. without reserve. Sixteen bales *Guayaquil*, mostly rusty brown quill, found buyers at 6*d.* to 11*d.* per lb. for sound. The exports from Ceylon, from October 1, 1886, to August 25, 1887, were 13,252,498 lbs., against 14,408,297 lbs. in the corresponding period of 1885–6. Telegrams from Ceylon announce the complete collapse of the local market.

Copper (Sulphate) weaker at 13*l.* 12*s.* 6*d.* for ordinary firsts.

Cream of Tartar remains very firm. Firsts are not offering at the moment, seconds are quoted at 126*s.* per cwt.

Croton Seed.—Fifteen bags dark mixed *Ceylon* seed sold at 13*s.* 6*d.* per cwt.

Cubebs.—Higher prices are again quoted, 23*l.* having been privately paid this week for genuine berries. At the auctions 8 bags stalky berries, a good deal mixed with spurious fruit, direct import from Singapore, sold at the high rates of 21*l.* 17*s.* 6*d.* to 22*l.* 2*s.* 6*d.* per cwt.

Cumin remains scarce. About 60 bags old *Maltese* seed were offered at to-day's auctions. For twelve of these 45*s.* per cwt. is asked. The others were bought in at from 46*s.* to 48*s.* per cwt.

Dragonsblood.—Only five cases good bright round cakes were shown. The price is quoted at 7*l.* per cwt.

Ergot of Rye is very firm. Nothing has as yet been offered of the new crop.

Fennel Seed.—For 50 bags Bombay 15*s.* is asked.

Gamboge remains very steady. The sales included one case fairly bright blocky pipe, somewhat specky in fracture, at 10*l.* 10*s*, and dull cakey pipe at 9*l.* 7*s.* 6*d.* An offer of 9*l.* 12*s* 6*d.* for a case fairly bright gum, but specky and cakey, was refused.

Gentian Root remains firm at the recent advance. Ten bales not particularly nice root were bought in at 18*s.* per cwt., an offer of 17*s.* being refused.

Glycerine.—There is no change in the market since last week. The best brands are still held at 80*l.* to 82*l.* for 1·260 S.G. by makers.

Guarana.—There is very little demand. Nominally, 4*s.* 6*d.* is asked for two lots shown at to-day's auctions.

Gum Ammoniacum shows no improvement. Nine cases fair yellow drop, slightly blocky, fetched 21*s.* 6*d.* per cwt. Other parcels were taken out.

Gum Animi. — At the last sales the fair supply of 78 cases *Zanzibar* was freely offered and 65 cases sold at easier rates—good pale and amber, medium size, at 13*l.* 15*s.* to 13*l.* 17*s.* 6*d.*; fair to good pale and reddish medium and small sorts, 12*l.* 10*s.* to 13*l.* 2*s.* 6*d*; bold red kind, 10*l* 17*s.* 6*d.* to 11*l.* 10*s.*; small gum, pale, 11*l.* to 12*l* 10*s.*; red, 8*l.* 17*s.* 6*d.*; weak pale of Madagascar character, 8*l.* 10*s*; bean and pea sizes, good, 7*l.* to 8*l.* 17*s.* 6*d.*; red, 5*l.* 7*s.* 6*l.* to 5*l.* 17*s.* 6*d.*; pickings, 5*l.* 7*s.* 6*d.* to 6*l.* 2*s.* 6*d.*; siftings, 31*s.* to 40*s.* Nine cases *Madagascar* withdrawn.

Gum Arabic.—At the last public sales no *East Indian* Aden gum was offered. Fine Amrad is firmly held, and holders ask higher prices. Good brown qualities have arrived freely, and sales are small. Ghatti gum sold fairly, though occasionally 1*s.* to 2*s.* easier, fair to good at 59*s.* to 65*s.*; middling, 52*s.* to 58*s.* Of Barbary character, 3 cases good sold at 99*s.* per cwt., and 3 cases low, partly insoluble, at 87*s.* 6*d.*; 100*s.* is required for good, 97*s.* 6*d.* having been refused. Of *Egyptian* gums 3 cases very fine Amrad sold at 8*l.* 5*s.*, good pale has also sold at 7*l.* 5*s.* per cwt. In Ghezirah no transactions have transpired. A parcel of fine bold Turkey sorts was partly sold at 14*l.* 5*s.* per cwt., and a few bales of fair gum have changed hands at 13*l.* per cwt. In *Senegal* gum small sales are reported of recent arrivals of Galam at 7*l.* per cwt. The Bordeaux quotations are maintained. The further arrivals of brown *Barbary* gum are almost all of inferior quality, which probably points to an exceedingly small crop. *Amrad* is in good demand at full to somewhat higher prices. Of *Cape* gum a few packages selected brought fair values, but the lower qualities are very difficult to move. At to-day's auctions 4 bales good bold Turkey sorts offered at 14*l.* 10*s.*, but no bid being then forthcoming, the owner declared 15*l.* to be the price. Three bales more, yellow and dusty, were offered at 13*l.* 10*s.* Fine pale bold selected Turkey bought in at 30*l.* nominally.

Gum Benjamin.—Nothing having been offered at the last sales, 193 cases (including all varieties) were included in to-day's catalogues. Some very good *Siam* was shown, but the demand for this gum is slack, and none was sold at the auctions. For bright, blocky seed 18*l.* is asked, and 12*l.* for dull, dusty and woody ditto. Of *Sumatra* gum, 2 cases very good pale almondy seconds, brown borders, sold cheaply at 9*l.* 7*s.* 6*d.*; fair seconds, rather false packed, at 8*l.* 10*s.* to 8*l.* 15*s.*, without reserve; good thirds at 7*l.* 10*s.* to 7*l.* 12*s.* 6*d.*; ordinary brown to red, little almondy and very false packed, 6*l.* 17*s.* 6*d.* down to 5*l.* 5*s.* Ten cases good third *Palembang* sold at 70*s.* per cwt.

Gum Elemi is rather less steady. It seemed to-day that part of one lot very fine soft pale Manila was sold at 33*s.* per cwt., but on the whole no offers were forthcoming, and the entire 97 packages catalogued were bought in, ordinary quality at 20*s.* per cwt.

Gum Guaiacum.—Eleven cases were placed in sale, but met with no demand at the prices required. For loose drop, very woody and mixed with dust, 1*s.* 1*d.* was refused, while 7*d.* per lb. is asked for dull block.

Gum Myrrh.—Forty-eight bales genuine myrrh were offered and nearly all bought in, good Aden sorts at 95*s.* to 100*s.* per cwt. One case dark Bombay sorts sold at 91*s.*, dull pickings at 45*s.*, and fairly good red siftings at 50*s.* per cwt. Ten bales opaque *Bdellium* were also offered as myrrh, but bad to be bought in.

Gum Tragacanth.—Several parcels were offered at to-day's auctions. Of these 15 cases fair pale seconds sold at 9*l.* 10*s.*, considerably below the valuation; very small curly seconds at 9*l.* 5*s.*; ordinary yellow thirds at 6*l.* 15*s.* Another lot good pale seconds was bought in at 12*l.* per cwt.

Honey is very steady and tending higher. At to-day's auctions 26*s.* 6*d.* was paid for fair liquid brown, and 25*s.* for candied brown *Jamaica.*

Iodine.—The convention price of 9*d.* per oz. is still maintained. though rumours of a coming change have again obtained currency. The slackness of the demand for iodides has caused prices to favour buyers. *Potass. iodide* is now offering at 11*s.* 3*d.* per lb.

Ipecacuanha.—At to-day's auctions a fresh decline of from 4*d.* to 6*d.* per lb. was established, and it now looks as if the advance which occurred early in the year will soon be entirely lost. Seventy-two packages were offered to-day, and, as the holders were content to accept the best prices offered, they managed to sell sixty-two of these at from 3*s.* 4*d.* to 3*s.* 7*d.* per lb. for thin wiry to good annulated sound root. Country damaged and mouldy root fetched from 3*s.* 2*d.* to 3*s.* 7*d*, according to quality and degree of damage. We have received a further consignment of 35 bales, per *Bittern*, *viâ* Antwerp.

Jalap.—Privately the feeling has been decidedly firmer, and 7*d.* per lb. is said to have been refused for good *Vera Cruz.* At the fag end of to-day's sales 30 bales of this variety were offered, and all bought in, sound but light and small at 7*d.*, mouldy at 6½*d.* to 6¼*d.*, wormy at 5¾*d.* per lb.

Kola Nuts.—One bag good West Indian sold at 7*d.* per lb.

Lead (Acetate).—German manufacturers now require 30*s.* per cwt. for white.

Lime-juice.—Not much interest was manifested in the 29 packages *Jamaica* lime-juice offered to-day, and the whole lot was bought in, common, strongly mixed with impurities, at 1*s.* 3*d.* per gallon. Good, 1*s.* 4*d.* to 1*s.* 5*d.*

Liquorice-root—A recent steamer brought us 6 bales good clean bright root from China, which were offered for sale to-day. The consignment will scarcely be repeated unless prices should show a considerable advance. The parcel was taken out at a nominal price, no offer being forthcoming, but it would probably not fetch more than 12*s.* or 15*s.* per cwt. if forced for sale, and is said to cost 52*s.* per cwt.

Manna.—We hear from Sicily that the crop this year will in all probability be an abundant one, and lower prices are likely to rule when the harvest arrives.

Morphia unchanged. Makers' price still 7*s.* 6*d.* per oz.

Musk.—The price has again advanced, though not yet to the extent anticipated by several dealers, who thought the 100*s.* limit would again be reached to-day. Fifteen caddies very fine *Tonquin* pods, first pile, thin blue skin, were offered for sale. Five of these, small to medium, and rather broken, were bought in at 100*s.* per oz., 95*s.* being refused. Eight others, bolder and less broken pods, were sold, one at 98*s.* 6*d.*, two at 97*s.* 6*d.*, one at 97*s.*, and the four last at 96*s.* 6*d.* per oz. Two other caddies were bought in at 97*s.* per oz. Third pile (adulterated) sold at 64*s.* for fine thin-skinned, 55*s.* for good but broken, and 30*s.* to 27*s.* 6*d.* for ordinary. *Trimmings* fetched 1*s.* per oz. Two tins white-haired pods, so-called *Assam*, sold at 15*s.* and 18*s.* per oz.; skinny and nondescript pods per land carriage, at 23*s.* *Grain* musk was nearly all bought in.

Nux Vomica firm. Twenty bales good pale seed from Madras sold at 10*s.* 9*d.*, 4 bales fine seed from Bombay bought in at 14*s.* per cwt.

Oil (Castor).—First *Calcutta* is quoted at 4*d.*; K. B. seconds at 2⅞*d.* per lb. *Italian* castor oil 4*d.* to 4¼*d.* per lb.

Oils (Essential).—*Cinnamon*: Ceylon exported between October 1 and August 25, 1886-87, 54,501 oz.; 1885-86, 89,248 oz.; 1884-85, 96,317 oz. The following figures relate to the exports of *Citronella* oil from Ceylon between Oct. 1 and August 25, 1886-87:— 7,749,626 oz.; 1885-86, 6,004,294 oz.; 1884-85, 5,318,138 oz. *Lemongrass* oil is held at $1\frac{15}{16}$*d.* per oz. *Star-anise* is still held at 7*s.* 3*d.* per lb., at which price a single case of "unworked" oil was sold at the auctions to-day. In China the market is weaker. *Cassia* oil 2 cases, of rather old import, sold without reserve at 2*s.* 7½*d.* to-day. Other lots are held at 2*s.* 8*d.* The Chinese market is quite lifeless, and in the absence of business quotations are nominal. Several parcels oil of *Cinnamon* were offered in sale to-day, but none were sold. The prices asked range from 9*d.* for common to about 2*s.* 6*d.* for very fine. Sales of *Cinnamon leaf* oil at 1⅜*d.* per oz. At the sales a small lot *Citronella* sold at $\frac{31}{32}$*d.* per oz.; larger quantities might be had at from $\frac{15}{16}$*d.* to ⅞*d.* per oz. for native brands. The price for French oil of *Lavender* has not been fixed yet, the crop being very late this year. In *Italian* oils there is no change. Eight cases good new West Indian oil of *Limes* were bought in at 4*s.* 6*d.* Five cases "Fisher's" *Nutmeg* oil, good pale, are held at 5¼*d.* per oz. *Otto of rose* unchanged. A fair business is doing up to 22*s.* 6*d.* for the finest brands. Of *Patchouly* oil 7 cases were offered; "Fisher's" brand is held at 3*s.* 3*d.* per oz.; other brands bought in at 2*s.* 9*d.* per oz. American *Peppermint* has had a further fall, and can now be had at 13*s.* 3*d.* for H.G H. brand, although the market closes slightly firmer. English *Peppermint* oil has been reduced in price since our last report. The finest quality is now held at 29*s.* 6*d.* to 30*s.* per lb. Dodge & Olcott's *Spearmint* oil was bought in at 20*s.* to-day. For good *Menthol* crystals an offer of 3*s.* 6*d.* per lb. was refused, which indicates a rather firmer position. Fair *Ylang-ylang* sold at from 8*s.* 3*d.* to 10*s.* 6*d.* per oz.

Oil (Mirbane).—Fourteen 1-cwt. drums are held at 5*d.*

Oil (Olive).—On our market *Mogadore* oil is in good demand at 32*l*, while other qualities are more inquired for than previously, but are not obtainable except at a considerable advance. At Liverpool sales have been almost entirely confined to the poorer descriptions, but there is no change in the better qualities. Business has been done in *Smyrna* oil at 33*l.* In Northern Italy and France the prospects of the olive crop are by no means ameliorating, and the position of the local oil markets has consequently become decidedly firmer, quotations rising slowly but steadily. From the Riviera di Ponente loud complaints are heard about the ravages of the olive worm, and it is said that the crop there will not amount to more than one-third of an average yield. In the French oil-growing departments the prospects, though far from good, are slightly less depressing. The yield in the Bouches-du-Rhone, the Var, and the Alpes Maritimes, is estimated at one-third of an average, but the olives are sound, and the quality of the oil will be good, especially in the Provence. It must, however, be considered that upon the production of Southern Italy the future of the market mainly depends, as from that quarter the bulk of the European oil is derived. From Naples we hear that the unprecedented drought has been broken only by some light showers, which are likely to do more harm than good to the growing crop. The olives being dry are less subject than usual to injury from the olive worm; but the trees are weak, and there is cause to apprehend that, as has been the case in former seasons of drought, there will be serious reductions before the olives arrive at maturity, and until abundant rains have fallen former estimates cannot be relied upon. The available stock of clear oil at Gallipoli is reduced to 4,000-5,000 tons, while about a similar quantity exists at Gioja. At the other Italian ports very little oil remains; and in the interior stocks are lower than usual. The reports from other producing centres are as follows: In the Ionian Islands and Greece there is not much oil available for export. The new crop goes on satisfactorily. In the Levant prices have advanced in Mytelene and Smyrna owing to the diminution of stocks, and to reduced estimates for the new crop. Sellers ask the equivalent of 31*l.* 10*s.* c.f.&i. U.K. for Mytelene cargoes, which prevents business. In Candia also the market is firm, and rising prices are expected. In Tunis business has been done at 30*l.* 10*s.*, c.f.&i., and sellers now ask 31*l.*, c.f.&i. U. K., but buyers decline to follow the advance. The market receives support, however, from other Mediterranean ports. From Morocco, in spite of the advanced price obtainable for Mogadore, supplies are not yet forthcoming, and it may be some months before shipments in any quantity are resumed. Advices from Spain continue less favourable as regards the progress of the new crop, and prices have further risen, latest quotations being 38*l.* to 39*l.*, c.&f., from either Seville or Malaga.

Opium.—There has been very little doing in our market, but the tendency of holders is a very firm one, and the least demand would doubtless cause a fresh rise. The result of the adjudication of the Dutch Government orders does not appear to be known. The latest Smyrna mail advices state that there has been a good demand for export, and orders for old Yerli opium could not be executed, as holders were not disposed to part with any. Thus far not a single case of new Yerli opium has been received at Smyrna. As regards the Persian crop, the latest advices state that a large proportion of the shipments which, in other years, were sent directly from Persia to China are now forwarded to Europe; but, even taking this into account, the shipments of Persian crop, which are admittedly much below the average this season, will not suffice to neutralise the deficiency in Turkey.

Orange-peel.—A few bags fairly good *Malta* ringlets sold at 7*d.* per lb.

Orris-root.—The Italian crop is a very deficient one, and prices tend higher. At to-day's sale 30*s.* was refused for a lot of 10 serons bold but rather dark *Mogadore.*

Patchouly Leaves.—Four bales good, newly-imported leaves, free from stalk and of a good flavour, were shown to-day. They are obtainable at 1*s.* 2*d.* per lb.

Quicksilver remains unchanged at 7*l.* 12*s.* 6*d.*, maker's price. All mercurials steady.

Quinine.—The market is quite lifeless, although nominally the quotations are unchanged. At to-day's sales 6,000 oz. "Fabbrica Lombarda" quinine in bulk, which have been warehoused here since 1883, were put up for sale, but, greatly to the disappointment of the audience, the broker withdrew the whole "for want of a limit." 1,000 oz. B. & S. quinine, also in bulk, were advertised "without reserve," and run up from 1*s.* 4*d.* to 1*s.* 7*d.* per oz. They were apparently sold at the latter price, but we understand that other lots might be had at 1*s.* 6½*d.* per oz.

Rhatany.—A parcel very chumpy Peruvian rhatany was bought in at 6*d.* per lb.

Rhubarb.—A supply of 113 cases was offered for sale and partly disposed of at easy rates. *Canton* (round) small, mostly good pinky fracture, and pale coat, 1*s.* 3*d.* to 1*s.* 4*d.*, medium to bold, half dark fracture, 1*s.* per lb. *Shensi* (round) good pale root, mixed sizes two-thirds good fracture, 1*s.* 7*d*, very small pale coated 1*s.* 2*d.*, very wormy pickings 6½*d.* to 7*d.* per lb. *Shensi high dried* small to medium rather dark fracture and coat 10½*d.*, bold, discoloured, very wormy 5*d.* *High dried* medium to very bold, good colour, 6½*d.* to 7*d.*, without reserve, sound pale coat 9*d.*, slightly wormy 8½*d.*, very wormy 4½*d.* per lb.

Sarsaparilla.—The 71 packages offered included a fair quantity of good grey *Jamaica* root, which finds a steady sale at full prices, country damaged to badly sea damaged at 1*s.* 11*d.* to 1*s.* 9*d.*; ordinary native Jamaica bought in at 1*s.* per lb. Good sound but chumpy *Guayaquil* sold at 1*s.*, damaged at 11½*d.* per lb. *Honduras* and *Mexican* neglected.

Senna.—Although heavy parcels of *Tinnevelly* senna continue to arrive, and no less than 522 bales were offered at auction to-day, prices are still advancing, and nearly the whole supply was sold, a good proportion, of course, for speculation. The proportion of good and fine qualities was much larger this week than on previous occasions. Fine bold green leaf, round and long mixed, fetched 9*d.* to 9½*d.* per lb.; good sound, 7½*d.* to 8½*d.*; medium to bold, slightly damaged, 6*d.* to 6¾*d.*; bold, but rather discoloured, 5*d.*; medium-size greenish sea-damaged, 4¾*d.*; partly thin mixed and specky, 4*d.* to 4½*d.*; thin, flimsy, and small, 3*d.* to 3¾*d.*; and common down to ½*d.* per lb. Green *Alexandrian* siftings are held at 8*d.* per lb. The competition for Tinnevelly senna was exceedingly brisk. During the present week 317 bales *Tinnevelly* arrived per *Carthage* from Bombay. At Liverpool 22 bales *Alexandrian* senna were landed.

SHELLAC.—At Tuesday's auctions a much smaller supply was brought forward than last week, and of the 646 cases offered 540 were disposed of, mostly without reserve, at an advance of about 1*s.* for *second orange.* *Button lac*, however, went quite 2*s.* cheaper. *Garnet* was not offered. The following prices were paid: Second orange: DA&Co. in triangle, pale but cakey, unworked Calcutta weights, 57*s.* to 58*s.*; MF in diamond, SK in double triangle, and KD in diamond, 47*s.* to 47*s.* 6*d.*; TN in diamond, 47*s.*; CB in diamond, livery, 46*s.* 6*d.*; PP in diamond, livery, 44*s.* 6*d.* to 45*s.* 6*d.* Button: Fine third, 45*s.* 6*d.* to 46*s.*; ordinary third, 40*s.* to 42*s.* 6*d.* To arrive, 50*s.* 6*d.* has been paid for second orange lac. Although our stock is a very heavy one, the bulk of it is in the hands of very firm holders, who have paid for it much higher prices than those now prevailing, and who are not likely to sell just yet. The really available stock should therefore not be estimated by the statistical returns.

The latest Calcutta mail advices are to the effect that a very decided improvement has taken place there, and the market has been cleared of nearly all available lots. The sales amount to fully 2,000 cases. It is reported that DC manufacture from October to March was done some weeks ago at 30 rupees. At present sellers will not offer more at any price. The market closes very strong, but quiet for want of anything offering. Button lac also shares in the advance, and lots which later were pressing for sale at very low prices are now held very firmly at 3 to 4 rupees higher.

SODA COMPOUNDS.—*Ash* quiet at 1⅛*d.* *Crystals* are held at 52*s.* 6*d.* here and 45*s.* 6*d.* on the Tyne. *Nitrate* has advanced to 9*l.* 10*s.* per ton for refined on the spot.

SOY.—China is now quoted at 1*s.* 11*d.* to 2*s.* per gallon.

STICKLAC.—Good *Siam* has sold here at 37*s.* per cwt., while in Bombay business has been done at 45*s.* per cwt.

SULPHUR is in good demand at advancing prices.

TAMARINDS.—A parcel of fairly good *West Indian* is held at 14*s.* per cwt.; dry old ditto at 8*s.* per cwt.

TURMERIC.—Hard yellow and bulby *Madras* finger is worth 7*s.* 9*d.* per cwt.

VANILLA.—A fairly heavy supply was catalogued, but the bulk consisted of nondescript wild varieties, vanillon, &c., and of inferior beans. A few good lots sold at steady rates: 7½ inches at 22*s.* 6*d.*; 6 to 7 inches, 19*s.* 6*d.*; 6½ inches, 18*s.*; 6 inches, 17*s.* per lb. The exportation of vanilla from Tahiti during the first six months of the present year has only been 2,086 lbs., against 3,740 lbs. in the corresponding period of 1886.

VERMILION.—2*s.* 6*d.* per lb. is asked for China.

WAX (BEES')—A supply of 254 packages was catalogued, but the bulk did not find buyers. The *Jamaica* wax sold includes fine yellow at 6*l.* to 6*l.* 5*s.*; good orange, 5*l.* 12*s.* 6*d.*; grey and dark mixed, 5*l.* 7*s*, 6*d.*; dark and red, 5*l.* to 5*l.* 5*s.* 61 casks good *Madagascar* sold briskly at 92*s.* to 94*s.*; orange *Cape* at 90*s.* to 97*s.* per cwt.

WAX (JAPAN).—Two parcels bought in; good pale squares at 55*s.* per cwt.

WITCH HAZEL EXTRACT.—Five barrels of this extract (90 per cent. witch hazel in 10 per cent. alcohol?) were offered and bought in at 4*s.* per gallon.

THE AMERICAN MARKETS.

NEW YORK, September 9.

THE demand on our drug market is increasing in proportion, and a firmer feeling prevails. No advance of importance has taken place yet, but with consumers stocking up freely it is not improbable we shall see higher rates for some articles before long.

The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can therefore see at a glance the course of this market compared with their own.

BALSAM COPAIBA.—With the exception of small arrivals of *Maracaibo* nothing came to hand for six weeks. Prices are unaltered, but tending higher.

OIL OF PEPPERMINT.—There has been quite an active demand from the Continent, resulting in sales of about 200 cans H. G. Hotchkiss oil at equal to $3.00 (13*s.* 6*d.*). Other inquiries are in the market. Bulk oil also experienced some attention, London buying freely at $2.50 (11*s.* net.). This is a low price for pure oil. The distillation in this state is nearly over, and reliable reports confirm the opinion given in a former report that the total yield will not be more than last year. The growers are holding their oil for $2 50 to $3.00, only a few being willing to accept less.

OIL OF SPEARMINT will be very low this year. A large quantity has been distilled, and now offers in bulk at $3.00 (13*s.*).

OPIUM.—Second-hand holders who hold 5 and 10 case lots at low rates are very anxious to sell. The market may be called weak, and has actually declined during the last month. Prime druggists' sells for 14*s.* in bond. The stock here is supposed to be ample for the consumption till next year's crop.

QUININE.—The demand for consumption is good, but the general tone of the market is weak. Stock in second hands is enormous, and still greatly reduced. There appears no hope of improvement. B. & S. sold the week in bulk at 36c. (1*s.* 7*d.*, 5 per cent.), and it is thought for large quantities less would be accepted.

SENEGA ROOT.—The price has advanced, owing to scarcity. We will have to fall back on old 1886 root, the stock remaining of which is light. Pure bright *Minnesota* is 32c. (1*s.* 8*d.*); dark chumpy, 30c. (1*s.* 6½*d.*) on this market.

CABLEGRAM.

NEW YORK, September 22.

BALSAM OF TOLU.—As anticipated in my letter of September 2, the price continues to harden. Latest sales have been effected at 40c. for balsam, in 10-lb. tins—say equal to 1*s.* 9½*d.* in London, all charges paid.

QUININE.—The market remains nominally unchanged, but no business is practicable, except at a decline.

REVIEW OF THE DRUG MARKET.

THE following particulars are taken from Messrs. Gehe & Co.'s semi-annual circular:—

ALMONDS.—From the Apulian districts of Italy and Sicily the reports of the new crop are, so far, favourable and a yield at least equal to that of last year in quantity is confidently anticipated, but quite recently the great heat has created a fear that the almonds might be small and of indifferent appearance. The first-hand stocks of last crop in the producing districts are now greatly reduced, and prices, which until June had been falling slowly but steadily, have shown a decidedly rising tendency since then. In Barbary almonds business has lately been somewhat brisker in London, but prices remain at the level of from 44*s.* to 48*s.* per cwt. The London stock is still large, being, on July 1, 1,487 packages sweet, and 701 bitter almonds, against 2,401 and 674 packages at the corresponding date of 1886.

BETEL OIL.—An important consignment of this oil, mention of which was made in the April circular, has now been received. The article excites a good deal of interest and may possibly become a recognised remedy in disorders of the throat. Mr. Schmitz, a pharmacist in Samarang (Java), is the maker of this valuable oil, and pronounces its active principle to be an aldehyde, while Eykman states it to be a phenol, probably carvacrol.

BISMUTH.—Business in bismuth and its compounds has remained quiet since last spring. The price fixed by the agreement of the producers has undergone no change. No considerable new sources were opened to enter into competition with the old ones, and the lots of Saxon and Bohemian bismuth occasionally offered by persons outside the combination are too inconsiderable to influence the market.

CANTHARIDES.—At the commencement of the season the reports concerning the harvest of cantharides in Russia were extremely unfavourable, and prices of from 140 to 150 roubles per poud were prognosticated. Since that time, although it has become apparent that the yield will be quite two-thirds of the good crop of last year, prices have only receded to 115 and 120 roubles per poud. The entire crop has already been bought up by dealers. At the Poltawa fair about 800 pouds (one poud = $36\frac{1}{10}$ lb.) of cantharides are said to have been offered, and buyers from abroad were not willing to concede the high prices demanded, so that the larger operators, in order to prevent a fall, were themselves obliged to buy up the stocks of the smaller holders. The collection of flies in Sicily, Russia, and Roumania has been a very large one this season, and consumers have been able to purchase on those markets on much better terms than in Russia. A considerable old stock in Hamburg and London has also assisted to supply the wants. Of course it must be considered that the old stock and the non-Russian supply will not ultimately suffice to cover all requirements. Purchasers, therefore, will have to fall back on the Russian stock sooner or later, and it is only a question whether the Russian owners will be able to hold out until that moment arrives, or whether they will be compelled to make concessions before that time for want of money.

ORTHOSIPHON STAMINEAS.—The leaves of this shrub (*N. O. Labiatæ*) are used in Java, of which island the plant is a native, in affections of the urinogenital organs, and have been frequently prescribed in Europe by French doctors. Commercially the leaves are generally met with in a rolled condition, resembling Chinese tea, because they can be better preserved in that state. The leaves are small, ovate, and dentate; the surface is dark green, the reverse somewhat paler; the branch veins run from the central vein towards the side of the leaf and unite at the apex.

STROPHANTHUS.—This new drug has been so exhaustively described in the trade journals that it will suffice to mention that the demand for the seed and the tincture continues unabated. Doubtless many errors prevail in our present notions of strophanthus and its preparations, but the future belongs, without any doubt, to *Strophanthin*, which, though already an article of manufacture, is as yet extremely high-priced. As our knowledge of the drug increases, the question will also be solved which of its varieties will become an established article of commerce—in other words, which variety contains a sufficient proportion of the active principle to be used in the manufacture of strophanthin. Attempts have been made to procure from Western Africa the pods, which are now used, and of which the origin has not yet been traced with certainty. These pods are at present said to be collected on the Shiri highlands in Eastern Africa, but the variety is said to occur in Western Africa also, though the collection is so difficult as to justify the high price. The plants generally grow singly, rarely in groups, and the natives are said to be in the habit of destroying the unripe fruit to prevent it from falling into the hands of Europeans.

SUCUPIRA.—Under this name a specimen of the bark of *Bowdichia major*, Mart., was shown in Europe a few years ago. In Brazil, the habitat of the plant, an extract is made of the bark which is said to be frequently and usefully employed as an antisyphylitic. During the South American Exhibition in Berlin last year, an attempt was made to import into Europe the ready-made extract, samples of which are still procurable.

(*To be continued.*)

A RUSSIAN physician states that he has succeeded in relieving toothache caused by caries of the teeth by making the patient rinse the mouth every half-hour with a dessert-spoonful of a 20-per-cent. solution of permanganate of potash, taking care to hold the liquid in the mouth for some minutes.

Foreign and Colonial.

THE CONVENTION OF GERMAN BROMINE MANUFACTURERS which was to cease on January 1, 1888, has been extended for a further length of time.

AMERICAN TURPENTINE PROSPECTS.—The prospect is that the present year will be a most successful one with both the turpentine manufacturers and their factors. It is said that the crop has been excellent and very appreciably greater than that of last year. The spring and summer crops have already been put upon the market, but the "scrape" has yet to be handled, in which, however, there is no reason to anticipate a falling off. The fine prospects, however, only refer to the spirits of turpentine. The quantity of rosin turned out considerably less than last year, but the loss has been equalised to some extent by the gains in the receipts and better prices of spirit.

SENNA-GROWING IN CEYLON.—Mr. W. A. de-Silva, of the Agricultural School at Minnevangoda, is again trying experiments with a view to the cultivation of senna for commercial purposes in Ceylon. Mr. de Silva is of opinion that *Cassia obtusifolia* will thrive well in many districts of Ceylon and form a good industry for the natives. The *Trop. Agric.* on the other hand, thinks that no object will be gained by the cultivation of senna in Ceylon, and points out that the narrow and broad leaved medicinal sennas have been several times introduced into the island, but, so far, without any favourable result. Ceylon, in fact, cannot in any way compete with Tinnevelly in raising such a cheap drug as senna, unless hereafter, in connection with the irrigation scheme of Kalawewa, it can be raised by irrigation. In many parts of the Tinnevelly district the plant grows wild, but it is also cultivated, chiefly near the town of Tinnevelly on lands which are irrigated by the Jampapurni river. The seed is sown in June or July, according to the burst of the monsoon, a shower being generally taken advantage of to sow. After two months picking commences and is carried on for two to four months, second pickings being secured by plucking off the flowers. The plants are pulled up at the end of the picking, and fresh seeds planted every year. The leaves must be dried in the shade. This cultivated senna is called "Nanga senna," and is valued in London at about 1*s.* per lb., according to colour and size of leaf.

DRUGS AND SUNDRIES FOR NORWAY.—It appears that British travellers in drugs, chemicals, or sundries are never seen in Norway, but there are, on the other hand, a good many German wholesale houses who send their representatives twice a year on a tour through Sweden and Norway, and do a very fair trade, as a rule, at from three to six months' credit. In all probability there would be a good opening for an enterprising British wholesale drug house, eventually in conjunction with a firm of druggists' sundriesmen, to cultivate business in Scandinavia, if they would agree to give the same credit which is accorded by German firms and not insist upon selling too large lots. The traveller working for them should be acquainted with German and at least one of the Scandinavian languages. The pharmaceutical business in Norway is conducted entirely upon the Continental system. Sundries are also sold by non-pharmacists.

ZANZIBAR ORCHELLA WEED.—The orchella weed which is shipped from Zanzibar is collected along the coasts of the African mainland at the mouths of the rivers, and forwarded by the collectors to Zanzibar in its natural condition, *i.e.* with the stalk. It is then picked and deprived of the stalk in Zanzibar, the pickers receiving a daily wage of from one penny to five farthings. The commercial value of the article depends entirely upon its colour and the fineness of the fibre. In Zanzibar the dealers grade it in four different qualities—Lindi or Makindi, Mombasso or Lamo, selected Brana (without stalk), and natural Brana. The prices range, as a rule, from one to four dollars per frahzilah of 35 lbs. Most of the Zanzibar orchella is shipped to Hamburg or London packed in large matted bales of about 700 lbs. each. Although there has recently been a revival in the article, it is not likely ever to recover the importance which it possessed before the introduction of aniline dyes.

Correspondence

Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

The Relation of Pharmacy to Medicine.

SIR,—In my short remarks on Dr. Leech's paper read at the Manchester Conference meeting on August 31 I stated that the natural inference to be drawn from his experiments and the arguments based thereon was that physicians would have to weigh their patients, in order to determine the dose which must be given of a medicine of definite strength. Although this was putting the matter very briefly, Dr. Leech not only commended the remark and admitted its force, but stated that the peculiarities of the patient were weighed as well as his body.

The peculiarities are weighed in the balance of the physician's mind. This is not a mathematical instrument, there is no fixed standard for it, and it is subject to variations far greater than the effects of temperature and displacement of air.

Leaving the peculiarities aside as beyond weights, measures, and demonstrating experiments, other factors will require to be considered which are more within practical range, but as yet far beyond the grasp of the scientist.

Bearing in mind the different degrees to which different tissues are affected by a given powerful pharmacological agent, will it not be necessary to calculate the proportion of muscle to fat, bone, and liquid in any weight of body experimented upon?

Since this cannot be done with anything like an approach to the accuracy demanded by the conditions of Dr. Leech's experiment, I contend that pharmacy satisfies the claims that medicine makes upon it, and is, indeed, far ahead of the latter science.

This relative position of pharmacy to medicine not only should, but must, be; for the physician can only wrest from nature her secrets, and fight the constant battle against disease, with the arms that are provided for him, and the arms must be fashioned and furnished before the battle can be fought. For example, without veratria Dr. Leech could not have demonstrated its quantitative relation to muscle; and as with veratria, so with strychnia, and quinia, and aconitia, and a host of other agents provided in a definite form by pharmacy.

It cannot be claimed by medicine that these equipments for the fight are used with the knowledge which I think is shown to be necessary if Dr. Leech's position can be maintained—that medicine demands more definite and uniform remedies than pharmacy supplies.

This is no slur upon medicine, and I wish to guard against being misunderstood. The knight who fights has a more difficult part than the armourer who fashions the weapons. In old time the armourer was held in high esteem as a skilled craftsman, but the knight was more honourably regarded, because his position demanded skill, and knowledge, and judgment of a higher order. It is a truism to say that the easier task is more easily performed, performed more mechanically, more by line and rule.

But does the physician always use with the greatest accuracy the remedies that are furnished to his hand? Is he not too often satisfied with two tablespoonfuls when 1 fluid oz. is what he means?

Did the physician demand gelatine capsules (he has had them more than thirty years), or pearl-coated pills (are they more accurate than naked ones?) or tabloids? Or did the pharmacist first furnish them and educate him to their value? In by far the great majority of instances the supply has created the demand, and the pharmacist has furnished to the physician more definite remedies than the latter knows how to use as Dr. Leech would have them used. He is adding to their number from day to day.

As to the pharmacist being guarantor of the medicines he dispenses, which one of them worthy of the name will not guarantee that his black-draught (the resultant of many generations of pharmacological observation) will speedily and effectively perform its accustomed duty?

Can the physician tell us how and to what extent the muscles are affected by its many components, or how the resultant effect is produced—of course, according to Dr. Leech's demands.

No, sir! The pharmacist is not behind the physician when the latter stands by Dr. Leech's revolving drum.

Yours faithfully,

Galen Works, S.E. JOHN MOSS.

Simple Medication: Ancient and Modern.

SIR,—Whilst so many of my pharmaceutical and quasi-pharmaceutical brethren have been discussing in Manchester the latest developments and probable future (or no future) of pharmacy, I have been beguiling my island solitude by studying its origin, and yet (strange to say) both they and I have had practically the same subject—the question of simple *versus* compound medicines The tendency of pharmacy now-a-days, according to Dr. Leech, is more and more towards alkaloidal and other simple preparations, in lieu of the mixed formulæ of our recent Pharmacopœia, and the first English author in whom I have met with the word "pharmaceutical" prefaces his disquisition upon medicine with an inquiry into the relative value of simples and compounds. The difference is that, whereas he, after a judicious balancing, inclines to a preference for the latter, we are returning to the use of the former. Simples, he allows, have the sanction of antiquity. Pliny "bitterly taxeth all compound medicines"; "Many times (as Agrippa taxeth) there is by this means more danger from the medicine than from the disease, when they put together they know not what, or leave it to an illiterate apothecary to be made"; "Those old physicians had no such mixtures; a simple potion of hellebor in Hippocrates' time was the ordinary purge"; but now every body of physicians has its own receipts and magistrals. "They of Noremberg have theirs; London hers; every city, town, almost every private man hath his own mixtures, compositions, receipts, magistrals, precepts, as if he scorned antiquity . . . and in the meantime the poor patients pay for their new experiments."

But these are the objections of others. My author himself is of the new school. "To say truth, there is no such fault, no such ambition, no novelty, or ostentation, as some suppose, but (as one answers) this of compound medicines is a most noble and profitable invention found out, and brought into physick with great judgement, wisdome, counsel, and discretion. Mixt diseases must have mixt remedies; and such simples are commonly mixt as have reference to the part affected, some to qualify, the rest to comfort, some one part, some another." And then follows a string of quotations from various authorities in support of this opinion.

We are now to return, though under somewhat different conditions, to the older system. Let us hope the profession will not relapse into the contempt in which it was then held! "All arts (saith Cardan) admit of couzening; physick amongst the rest doth appropriate it to herself"; "Much emulation, imposture, malice, there is amongst them; if they be honest and mean well, yet a knave apothecary, that administers the physick, and makes the medicine, may do infinite harm by his old obsolete doses, adulterine druggs"; "They are a kind of butchers, leeches, men-slayers, chirurgeons and apothecaries especially, that are indeed the physicians' hangmen, carnifices, and common executioners." Thus, some two hundred and fifty years ago, wrote the learned and curious Burton. To many of the functions of the apothecary of his day we pharmacists have succeeded, as well, alack! as to his "—— pinch'd up nose, and his complexion of the

Roman wash, stuck full of black and melancholy worms." We have enjoyed but a short heyday of favour, and now, by the perfection of our own art, we are to be improved off the face of the earth. It is a melancholy pleasure to reflect that if Dr. Leech's forecast prove true, physicians themselves will probably follow us into limbo. The wholesale houses which advertise most will succeed to the business, and so will be renewed that ancientest of all systems of medicine of which Burton elsewhere tells us "that custome of the Babylonians, that have twenty professed physicians, but bring all their patients to the market to be cured." When that happy day arrives, perhaps such extremely "simple" remedies as this of Amatus Lusitanus, "for a hypochondriacall person that was extremely tormented with winde," may come again into vogue:—"Put a pair of bellows end into a clyster pipe, and applying it into the fundament, open the bellows; so draw forth the winde: *Natura non admittit vacuum*." In any case, our occupation will be gone. "So the whirligig of time brings in his revenges."

I am, &c.,

Epworth, September 10. C. C. Bell.

The Drug Salerooms.

Sir,—This week another drug sale will be held, and some scores of people, compelled every fortnight to pass a day in what is probably the most unsuitable saleroom that could possibly be found in London, will go home with aching heads and ruffled tempers. Nothing but the feeblest of jokes or a peevish bickering about the ownership of a lot will occasionally break the monotony of six hours' weary plodding through senna, "vanilloes," and the rest of it. But how, I would ask, can a better spirit be looked for among an assembly which transacts its business in an overcrowded apartment, the ventilation of which is lamentably deficient, while its atmosphere is charged with unsavoury odours proceeding from a well-frequented restaurant and busy kitchen beneath? In the morning the sun blazes through four windows imperfectly supplied with blinds of various glaring colours. In the afternoon the culinary vapours are blended with those of the fragrant weed. Unfortunately, the best specimens of the latter are consumed in the neighbourhood of the windows, and their fragrance is lost to the room; while the weed affected in other portions of the apartment occasionally emits odours strongly recalling the renowned "Infamos Stincadores" brand.

A few, a very few, of the seats in the room are fairly comfortable, while about a dozen of the audience are accommodated with decent chairs with backs; but it is painful to behold the number of less fortunate frequenters who are compelled to spend six hours in succession on backless benches, which are said to have been procured by a former proprietor in a job lot when the Spanish Inquisition sold off its stock of torturing appliances.

Acoustics there are none worth speaking of in the room, and whenever a particularly interesting lot of goods is reached, and bidding proceeds in a subdued tone from a corner of the room, there is a general rising at the other end of the apartment for the purpose of catching sight of the mumbling bidder. In the words of Barny Brady there is—

> Such a reaching, and long-neck stretching, and elbow shoving, and looking hard;
> 'Tis like the wonder expressed at thunder by geese and ganders in a farrem-yard!

The lavatory adjoining the saleroom is as badly appointed as well could be. Soap there is frequently none, and latterly a water famine has prevailed, equal to that which travellers aver reigns in such far-off regions as West Ham and the Sahara desert.

There have, I understand, been occasional rumblings in influential quarters, indicating a feeling of dissatisfaction with the arrangements generally; but these sounds have now apparently died away, and it seems as if we are doomed to continue to hold our fortnightly auctions in the modern substitute of King Augias' stable, as though no more suitable place could be found in the City.

I am, sir, yours truly,

Mincing Lane, E.C., Sept. 19. Pooh-Bah. (164/40.)

[Strange to say, our correspondent's complaints have to some extent been anticipated by the proprietor of the salerooms. At Thursday's auctions the frequenters of the "backless benches" were much gratified to find these seats replaced by chairs, and a liberal water supply again graced the lavatory. —Ed. *C. & D.*]

Arrangements with Medical Men.

Sir,—Replying to "Subscriber's" inquiry (No. 42/154) I may state that we dispense for three different associations, and the terms are as follow:—

No. 1 is composed of twenty-one members, and each member pays 1*s.* 3*d.* per month.

No. 2, number of members not limited, the doctor pays 20*l.* yearly, average number of prescriptions, with repetitions, three per day.

No. 3 same as No. 2.

In each case bottles, pots, &c., to be provided by members, or else the usual charge made for same, and each time a repetition of medicine is required prescription to be reinitialled by prescriber, or in default of this the usual dispensing prices to be charged.

Proprietary preparations or large quantities of expensive ingredients to be paid for, the doctor informing his patients of this and notifying same on prescription.

Yours faithfully,

Giovanni. (160/58.)

"Love Powder."

Sir,—I hardly think the composition mentioned in your last would resemble that of which Prior speaks in one of his poems, where the love-lorn maid, bewailing the coldness of the subject of her affections, tells you that last market day

> To the 'pothecary's shop I went

[Evidently not to purchase P. Amyli Odorif., for she proceeds]:—

> The sparkling flies within his cup I'll throw,
> And soon the swain with fervent love shall glow.

Yours,

Worthing, September 17. J. Burt.

Dragon's blood was formerly sold at Guernsey for this, but the demand has died out. It was surreptitiously mixed with beer by forlorn maidens to fan the flame of their swain's affections. H. C. (162/30.)

Blaud's Pills, B.P.C.

Sir,—I take the liberty of giving you my experience of the new pill. I followed the directions literally. The mass was very soft, more so than I had ever been accustomed to make it, and it was difficult to roll out, but the pills soon "set," and have kept their shape well. I was afraid there was too much moisture, but the pills are all right, as you can see from the sample I have sent, which were made a week ago.

W. E. W.

The Irish Pharmacy Act.

Sir,—Thanks to the columns of The Chemist and Druggist, we have a ground where members of the Pharmaceutical Society of Ireland as well as others may "break a lance" in friendly controversy, and I am pleased my letter has called forth the rejoinder of Mr. George Lane McCormack. I assume we agree in object, and differ only in how it is to be attained.

I do think my letter has been misread. I certainly thought I laid the blame of legal bungle, if any, at the doors of the Privy Council, and of the Crown lawyers of the day, in saying the council took a wrong step at the beginning with their advice and sanction. I think I implied that the present councillors are entitled to sympathy in carrying their inherited burden, and I have not written one word against successful prosecutions. I think the Council are perfectly right when they have a good case of violation of the Act to prosecute it properly and successfully.

In reply to my remark as to the legality of the Preliminary examination I am referred to a passage by the President of the Pharmaceutical Conference, thus:—"I do most emphatically protest against the injustice of allowing youths to enter a calling, the conditions of which have never been explained to them." I think (adds the writer) I need not give "further proof that the Preliminary examination is essential to youths before ever they dream of pharmacy." It is the first time I ever learned that the object of the Preliminary examination "was the explanation of the conditions of the calling," and for the life of me I cannot imagine how the writer expects "youths" to go in for examination "before they ever dream of pharmacy." I consider it very desirable that the Preliminary should be passed before apprenticeship, and always recommend it; and consider it an advantage that the council can divide it, but that is not the question. The question I raise is the provision of the 21st section of the Irish Pharmacy Act. When we come under an Act of Parliament it ceases to be a question of what is agreeable or what is best, but of what is enacted, and I am still convinced that "all persons desirous of being registered as pharmaceutical chemists may at any such examination present themselves for examination, and they shall be examined," and that the examiners are empowered to grant or refuse in their discretion certificates. Up to the present no one has thought fit to test this; but now that the council are getting active it may be better for some one who has not crossed the Rubicon to jump the fence. My letter in no way suggested that the council should go to a lawbreaker "and implore him to go up for examination;" it rather suggested that the council should correct their regulation in the spirit and letter of the Act so that they may not have a further fall. Did I reflect on the members of the wholesale-trade who are on the council? I did not intend to do so; they are a minority in the council, and but for them the advanced party would have ridden harder and faster. They are a party, not one of whom I would wish to see removed; they add strength and dignity, they are the representatives of wealth and intellect (like the lords in Mr. Gladstone's model Parliament of castaway Ireland). "A question arises, and I should like it well tested. Is it necessary to have a register of chemists and druggists at all?" This ought surely to have been in the past tense. (Query: Where is "rule 3, regulations"?) The question appears to have been argued in the Belfast case and, if I understand rightly, was decided in favour of the Society. My view hitherto has been that sec. 15, and clause 3, sec. 16, with sec. 19, refers to enabling "certain persons to acquire the title of chemist and druggist," not to "assume" it, as Mr. Lewis put it (*vide* report), but sec. 31 recognises certain persons, whose trade was not to be interfered with, as chemists and druggists, just as sec. 5 nominates certain persons to be pharmaceutical chemists. The latter are placed on a register. Why not the former? Perhaps sec. 18 answers.

I hope our mutual appeal will have the effect of producing an interesting annual meeting; we would be better members if we knew one another's face and voice.

Yours truly,

Dublin. R. J. Downes.

The "Belfast Pharmaceutical Chemist," whose letter last week we abridged, is very indignant, and sends us another this week requiring us to "be careful not to withhold any of its vital parts, as you did in my last." If we do, the gentleman threatens to withdraw his correspondence and subscription. In his last letter he stated that our article on "The Breakdown of the Irish Pharmacy Act" was "utterly untrue." We thought that silly abuse of that kind disfigured a discussion, and the expression was therefore omitted. As our correspondent evidently regards the assertion as a vital point, we are willing that he should have the full benefit of it. He says to that damaging article "we attribute the entire loss of this last case and all that succeeds it." "We have lost all our expenses, time, &c. . . . Our loss is therefore a very serious one, as all these penalties would have come to us to defray our law costs, witnesses' fees, expenses, &c. Therefore we ask you for a full apology for the serious injury done to us by you; otherwise we may be compelled to institute proceedings against you for the recovery of proper damages." We assure our correspondent that we appreciate too highly the compliment thus paid to our article to apologise for it.

In the new letter, which we are so imperiously enjoined to print in full, the writer says:—

"Your article of last week again calls for special correction, as you evidently don't understand the Irish Act as you should, when you write about the recent prosecutions against 'chemists and druggists in Ireland.'

"The Pharmaceutical Society has not, neither does it intend to prosecute chemists and druggists, *i.e.* those who were trading as such on their own account at the passing of the Act, and whose vested rights were fully protected therein, where it states they shall not be *interfered* with (notice it does not say *register*, as there was no intention of doing so, but evidently that these persons should die out); but only to prosecute those interlopers, or *sham druggists*, who have commenced business since 1875 without undergoing its necessary examinations as others have done, and who were well aware that they were acting illegally. You also properly remark about the 'pharmaceutical chemists being quite unable to meet the country's wants,' although you seem to forget that there is still a body in existence called apothecaries. However, you are quite correct, as the country wants more pharmaceutical chemists and fewer of these sham gentry, who are breaking the Act in its every clause; and unless the Pharmaceutical Society begins at once to enforce the law all over Ireland, there will be still fewer men to take its qualification, such being perfectly unnecessary at present, as the Act has been administered. But let this be done, and then every person will see the necessity of passing its examinations, when there will very soon be more than enough pharmaceutical chemists to satisfy the country's requirements. Whereas, for the Act to remain as it is, nearly a dead letter, it will be sure to convert the pharmaceutical chemist into an almost extinct animal.

"Again, if the Pharmaceutical Society has need of funds to enable it to do this, let it appeal to each of its licentiates to become members, and contribute in addition, say, 1*l*. each, and these again, but only if necessary, to the wholesale houses for further subscriptions, and with these funds let it begin to work in earnest. Therefore we want you in future to write all your articles in support of legitimate pharmacy and the proper Acts, which are passed for its furtherance and the better protection of the public."

The rest of our correspondent's letter, as far as it is intelligible, is libellous.

An "Old Chemist and Druggist" (Belfast) writes to us in the opposite sense. He is sarcastic on the letter of a "Belfast Pharmaceutical Chemist" which appeared last week, and bitter in defence of those who were assistants at the time of the passing of the Act in 1875, and who then found themselves "thrown on the world without a calling to sustain themselves after serving five years. And indeed, sir, I know some who served seven years, unless they have the desire of paying a premium to serve four years extra (mark you!) with one of these pharmaceutical gentlemen, when they themselves have been provided for by the law and handed their certificates."

In conclusion this writer adds:—"The chemists and druggists of Ireland have a right ever to remember your extreme kindness in thoroughly exposing the errors of the Irish Pharmacy Act, 1875. And let us hope ere long these pharmaceutical gentlemen will be compelled to reconsider the position of all acting as chemists and druggists, and learn to do to others as they would like to be done to."

Sir,—I am sorry that "A Belfast Pharmaceutical Chemist" should descend to the personal in discussing through your columns the character of Sir James Haslett and his conduct on the Bench. I was present, and consider that Sir James Haslett acted as a gentleman. I learn it was not his pleasure to be there on that day, but as he was summoned he was bound to attend. Your correspondent seems to be acquainted with the underhand proceedings that are going on, as he says he understands these cases are to be brought on again, I think the sooner the better, as the defendants intend to fight the matter from one Court to another until they get satisfaction. One wholesale gentleman here who is a member of our Chemists and Druggists' Association has intimated his intention to spend 50*l*, if called upon, in our defence. I may say that a subscription-list has been opened here, every member of the trade having contributed his mite, the wholesale firms doing their share.

It is but right also that all members trading as chemists and druggists throughout Ireland should co-operate with the Belfast traders, and so make the matter more general instead of partial. We have a good case, as is admitted by all reasonable-minded pharmacists, as well as doctors and leading men, that it is necessary that there should be the two grades working in harmony with each other. The conduct of the Council in framing the Act of 1875 and inserting a clause that was not read by a dozen intelligent men in Ireland, if the Council thought proper to create a body of chemists and druggists, was a monstrosity. Was there not such a body without their creation? If they did not intend its continuing, why did they not create a commutation fund and pay a lump sum to all who would be willing to be bought out? I am convinced that the Privy Council, when sanctioning the by-law passed at their first meeting resolving that they would not create a grade of chemists and druggists, did not know the large number of respectable, important, and loyal subjects they were interfering with. I trust the Council will very soon reconsider the matter.

I am, yours &c.,

Belfast, Sept. 20. A WHOLESALE DRUGGIST.

Ipecacuanha Dust.

SIR,—If "Bon Accord" could mix his ipecacuanha powders in the warehouse or an unoccupied room, as well as using an oro-nasal respirator, he would find it far better than compounding them in the dispensary.

My experience has been that it is not only the dust at the time of mixing, but breathing an atmosphere impregnated with fine particles of dust, that causes such attacks of asthma.

If "Bon Accord" will send his address to me, I will forward for his perusal "Thorowgood on Asthma."

Sandown, I.W. G. BROWN.

SIR,—Has "Bon Accord" tried smoking stramonium cigarettes for his trouble? If not, let him do so.

HEDER.

Notes by "Phœnix."

Cold Cream.—I am fully in accord with the views of "J. Throssell" respecting cold cream being discoloured through using steel knives; in fact, I think all ointments are better if bone spatulas are used. I consider liq. potass. and all alkalies totally unnecessary in making cold cream. Below I append a formula for it, which I have every confidence in recommending; properly prepared it is a smooth homogeneous ointment of suitable consistency, and will keep over twelve months without showing any signs of discoloration or rancidity. Of course steel knives must on no account be used in consequence of the action of salicylic acid on iron:—

Cetacei	℥xss.
Ceræ alb...	℥xss.
Ol. amygd. pallid.	℥xlviij.
Aq. rosæ	℥xvj.
Ess. bergam.	ʒiv. vel q s.
Otto rosæ	ʒiv. vel q.s.
Acid. salicylic.	gr. 160

Physic Ball for Horses.—The following makes a splendid mass, but must be rolled out whilst warm, and will keep almost any length of time without losing shape:—

Aloes barb.	1 lb.
Pulv. zingib.	3 oz.
Glycerini	2 „
Ol. Ricini	3 „

Melt aloes, glycerine, and oil in water-bath, and stir in ginger. ℥iss. = j. aloes.

Below is a form for **Glycerine and Cucumber Cream,** which I find produces a better preparation than the former one I wrote about, and I have never had the slightest trouble with any separation. The *modus operandi* is different to the former one:—

Curd soap	℥ss.
Water	℥iss.
Cucumber pomade	℥iij.
Glycerine	ʒj.
Perfume	q.s.
Water to	2 pints

Melt soap in water; melt pomade in large mortar made hot; thoroughly incorporate soap with pomade; let it stand twelve hours. Add perfume and glycerine, gradually add water, mixing each lot of water with the mass before adding more; finally make up to 2 pints and strain.

Syrup of poppies is always sold for Diacodium, diascordium, and a host of other corruptions of like name.

A Tip.

SIR,—To deresinise essence of ginger, sodæ phosphas and calcii chloridum are used; three of former to two of latter are the proportions, as far as I remember. After this your client will soon work the oracle!

September 20. FIDEM. (163/54.)

[Soluble essence of lemon is also made in the same way. The proportions for a gallon of soluble essence are 300 grains of chloride of calcium and 1½ oz. of B.P. phosphate of soda, with sufficient carbonate of soda to neutralise. An equivalent proportion of trisodic phosphate without carbonate of soda may be used. In making soluble essence of ginger, mix 4 pints of the strong tincture with 3 pints of water. Dissolve the calcium chloride in 5 oz. of water, and add it to the mixture; dissolve the phosphate in 15 oz. of water and add it; shake well, and add 3 drachms of carbonate of soda. Filter after a day.]

Wanted: Tr. Euonymi, U.F.

SIR,—In a recent issue (September 3) of your valuable journal you give a list of the non-official preparations as recommended by the committee appointed to draw up same, which formulary must prove of immense satisfaction both to prescriber and dispenser, but more especially to the latter.

In this list there does not appear a formula for making tinct. euonymi, which might with advantage be added.

In THE CHEMISTS' AND DRUGGISTS' DIARY (last issue) you give a form for this tincture—2½ oz. euonymin to 10 oz. S.V.R. This does not produce a satisfactory preparation, very little indeed of the euonymin being soluble in the spirit.

Underneath is a form for preparing this tincture, for which I am indebted to the courtesy of Messrs. Burgoyne, Burbidges & Co.; almost the whole of the euonymin is soluble in the menstruum, and the finished article has a bright reddish-brown appearance:—

Euonymin	160 grains
Spt. tenuior	Oss.
Aquæ ad	Oj.

Yours truly, GIOVANNI. (160/58)

[The diary formula does not direct 2½ oz. of euonymin, but 2½ oz. of euonymus bark, to be used. The tincture made from the bark is said to be much better than that made from the resinoid. That is a point that the U. F. Committee might work at.—ED.]

DISPENSING NOTES.

[*The opinion of practical readers is invited on subjects discussed under this heading.*]

The Illegible Prescription.

SIR,—I have often been amused at the anxiety manifested by many of my brother pill-builders to decipher what are termed illegible prescriptions. Efforts of that kind I do not feel called upon to make. I consider there is no credit in pandering to the gross carelessness, or, it may be, the studied eccentricity, of any medical man on such a matter. The style of writing—save the mark!—of some prescriptions that are presented at the counter would disgrace a street arab, and all such—which resemble nothing so much, perhaps, as diagrams of a spider's lovefeast—I should, as a matter of principle, refuse to have anything to do with. The legibility of a prescription ought to be, in its way, as carefully attended to by the physician as the diagnosing of disease.

Yours, &c.,
CANNY NEWCASSEL. (159/44.)

SIR,—Regarding the almost illegible prescriptions (the fac-similes of which you kindly furnish us with from time to time), you will perhaps pardon a suggestion to the effect that if you could obtain a few more of the same wretched type, and print them, side by side, with as correct a rendering thereof as could be given in legible type, such a sheet might be produced as would be suitable for exhibition in the window. This would afford chemists an opportunity of showing their friends and the public some of the difficulties attending the preparation of their medicines, and would perhaps lead some physicians to take more pains with their caligraphy.

Yours faithfully,
SPES.

Extractum Ergotæ Liquidum.

SIR,—I received a prescription a few nights ago, ordering

Ext. ergotæ liq.	℥ij.

Sig.: To be taken as directed.

The following morning the customer returned, asking for 8 oz. of the same "at once," as he was going by the first train. The customer being a stranger, what ought I to do?

J. J. (158/55.)

[Refuse to supply without a special order from the prescriber.]

SIR,—I had the following to dispense at an early hour this morning:—

Ext. ergot. liq.	℥iss.
Aq. cinnam. ad	℥vj.

℥j. 2 dis horis.

Thanks to a rather quasi-medical education, which I believe Mr. Ernest Hart considers dangerous for us chemists to have, the doctor was not bothered unnecessarily, and no delay occurred in sending the medicine, which was urgently required. I would suggest that in the next B.P. the dose of ext. ergot. liq. should have two ranges, like vin. ipecac.—viz., as an astringent, 15m. to 30m., and as an ecbolic, ʒij. to ʒiv.

Yours obediently,
TOPSY, PH.C. (161/23.)

Unguent. Pagan.

SIR,—For the information of "Unguentum," ung. pagan. is simply *Ung. pagenstächer*, which is an ointment containing 6½ per cent. of amorphous oxide of mercury.

Dr. Pagenstächer was a German oculist of some notoriety.

Warrington, September 17. J. RYMER YOUNG.

SIR,—Unguentum Pagenstächeri is undoubtedly meant. It is the formula of Dr. Pagenstächer, an eminent Continental pathologist and oculist, and is as follows:—

Hyd. ox. flav.	gr. iv.
Crem. frigid.	ʒij.

M.

It is sometimes written as "Ung. P."

Yours truly,
TOPSY, PH.C. (161/62.)

Similar replies have been received from W. K. Inglis (Oldham), T. B. Illsley (Barnard Castle), Hills Brown (Lambeth), R. S. Stanley (Southwell), G. Brown (Sandown), A. Marsden, W. Ward (Consett), R. Knowles (Wallington), G. Brisley, Dolor, Notts, W. H. B. (Dublin), Lignum, and W. A. W. (London). The strength generally given is 4 grains to the drachm, and cold cream is the common basis; but spermaceti ointment and vaseline are also mentioned, with, in one case, otto of rose to flavour. One correspondent states that Mr. Charles Bader, M.R.C.S., always prescribes glycer. amyli as the basis.

Chlorine Mixture.

SIR,—When a mixture may readily be dispensed without chemical decomposition, I think it decidedly wrong to adopt extraordinary methods to induce a reaction which is not prescribed.

Prescriptions for gargles and mixtures containing potassium chlorate and hydrochloric acid (similar to that given in your last issue) are of every-day occurrence; they also appear in the pharmacopœias of several London hospitals, and should be dispensed upon the orthodox plan of commencing with the bottle half filled with the water or other menstruum ordered.

When a chlorinated mixture is intended, the prescriber would in all probability order acid hydrochlor. fort., and append a note, "M.S.A. ut retinetur chlorum," "fiat mistura chlorinata," or some similar direction.

Concentrated solutions of magnesium sulphate and potassium bicarbonate, especially if heated, evolve carbonic anhydride and precipitate magnesium carbonate; in cold dilute solutions no precipitate or evolution of gas appears. The latter would be the correct way to dispense such a mixture.

I have heard of a mixture containing pulv. tragac. co. being dispensed with boiling water because of the starch in it. I hope I need not comment on this.

Yours very truly,
35 Clifton Road, Maida Vale, W. R. H. PARKER.

SIR,—Occasionally I have had a mixture ordered with the directions you give. Usually, in my experience, no directions are given, and we then please ourselves which method we adopt.

HEDER. (164/31.)

A Quinine Mixture.

SIR,—How can a presentable mixture be made of the following?—

Potassii iodidi	ʒij.
„ bicarbonatis	ʒiij.
Tincturæ quininæ	℥ij.
Infusi aurantii	℥vj.

M.

COCAINE HYDROCHLOR. (161/20.)

[We get the best results as follows:—Dissolve the potash salts in 3½ oz. of the infusion, add ½ oz. of acacia mucilage, shake, and add the tincture of quinine. A good mixture containing the quinine precipitate suspended in a fine state of division is the result; the precipitate subsides in the course of a few hours, but it diffuses readily, whereas without the mucilage it sticks to the bottom of the bottle.]

MISCELLANEOUS INQUIRIES.

Books.

163/70. *Indagator.*—Huxley's "Elementary Physiology" (Macmillan, 4*s.* 6*d.*) will give you an intelligent knowledge of the nerves and muscles.

156/51. *Mensuration.*—Wilson's "Inorganic Chemistry" (Chambers, 3*s.* 6*d.*).

158/35. *Fides.*—Kelly's "Directory of Chemists and Druggists" may suit you, or the "Pharmaceutical Register." The former gives those in business only.

157/64. *X. Y. Z.*—Beasley's "Druggist's Receipt-book" is a good all-round book for the shop (Churchill, 5*s.*).

158/73. *Botanist.*—There is no chemical used to preserve the natural colour of mounted botanical specimens. The precautions are to dry the plants thoroughly, use a good mounting medium (such as tragacanth paste), and dry as quickly as possible after mounting.

158/65. *Adeps Benz.*—Try the application of a mixture of common hydrochloric acid, 6 parts, and butter of antimony, 1 part.

158/64. *J. Vaughan.*—M.K.Q.C.P. means "Member of the King's and Queen's College of Physicians."

158/74. *Dentist.* — **Amalgam Stopping.** — Precipitated copper, 3 parts; mercury, 7 parts. Damp the copper with solution of nitrate of mercury, add the mercury to it, and mix under hot water.

4/7. *A New Subscriber.*—You do not name the colours required.

157/53. *Tussis.*—**Cough Linctus** (Linseed, &c.).—We have published the formula frequently. It is said to be:—Chlorodyne, ♏xlv.; ol. anisi, ♏iv.; tr. tolut., ℥ss.; tr. senegæ, ʒss.; oxymel scillæ, ℥iss.; inf. lini, ad ℥iij. Dissolve the oil in the tincture of tolu, add to the oxymel, then mix in the other ingredients. Dose: ʒj. to ʒij.

156/74. *J. Pigott.*—Your syrup is too weak in sugar. Boil it for ten minutes to stop fermentation; then add ʒiss. of salicylic acid to each gallon.

156/49. *Clericus.*—The name of the burdock plant is *Arctium lappa.* Try Potter & Clark or Butler & McCulloch for it.

156/71. *M.*—Your question is not quite clear. You may produce an intense degree of cold by dissolving nitrate of ammonia in as little water as possible. Advantage of this fact is taken in an ice machine which has long been in use. Two jars (one to fit into the other) may be extemporised for the purpose of making an ice.

156/31. *M. Marshall* (Dunedin).—See advt., THE CHEMIST AND DRUGGIST, July 2, p. 31, and other issues.

148/38. *B. Olcovich* (San Francisco).—There is no process that we are aware of for rendering petroleum smokeless when it is burnt. Smoke means imperfect combustion and the necessity for a better supply of air.

Various.—*Omega* (156/16).—The article on dermatological therapeutics gives you the information. *J. C. O'Farrell* (156/7), and *Vaseline* (156/63).—We have given formulæ recently. *Sodium* (155/71).—1. Filter. 2. Gaskell, Deacon & Co. *Lapis* (who does not send his name) should consult "Books" in last index. THIS is the text-book for the London drug markets.

158/46. *Laurance.*—**Calisaya and Iron.**—The Nationa (U.S.P.) Formulary gives a formula for this. It is made from detannated elixir of cinchona and phosphate of iron, and is very complicated. Professor Remington's formula is simpler. It is as follows:—Quinine sulphate, 18 grs.; cinchonine sulphate, 6 grs.; quinidine sulphate, 5 grs.; cinchonidine sulphate, 3 grs.; elixir of orange (Elixir Simplex, B. P. C.), 32 oz. Dissolve the alkaloidal salts in 5 oz. of the elixir by the aid of heat, and add the remainder of the elixir; then dissolve 128 grs. of citrate of iron and ammonia in the product.

158/43. *H. T.*—**Black Ink for Rubber Stamps.**—Crawshaw's black wool dye and methylated spirit, of each 1 drachm; acetic acid, 10 drops; water, 5 drachms; glycerine, 2 drachms. Dissolve the dye in the mixed liquids by shaking.

156/64. *Gallus, &c.*—Slaked lime is said to preserve eggs, but it doesn't—nothing will if there is a chick in them. Coating with melted paraffin is the last suggestion.

156/2. *F. G. P.* (Pau).—**Peptone Wine.**—Peptonised extract of meat (Koch's or other make), 240 grs.; Malaga, 1 pint. Dissolve the extract in the wine by shaking, and filter.

156/15. *Juventus.*—Try a weak solution of bromidine (ʒj. to a pint) for deodorising the rubber.

158/41. *Nemo.*—To frost window glass with sulphate of magnesia, sponge it with a strong solution of the salt in warm water. After it dries you may varnish with copal or sandarac varnish.

159/43. *J. K.*—The Leclanché battery is generally used for electric bells, and is charged with a solution of chloride of ammonium.

159/62. *Æsculapius.*—**Rangoon Oil** is a petroleum oil. The heavier mineral oils from all sources are now given for it. Your sample A is such an oil; B contains fish oils. For **Liquor Tritici Repentis**, the fluid extract is intended.

155/45. *Inquisitive.*—The following is a French formula for **Mustard**:—Best flour of mustard, 2 lbs.; fresh parsley, chevril, celery, and tarragon, of each ½ oz.; garlic, 1 clove; 12 salt anchovies (all well chopped); grind well together, add 1 oz. salt, and sugar sufficient to sweeten, and enough water to make into a thin paste. When put into pots a red-hot poker is to be thrust into each, and a little vinegar afterwards poured upon the surface.

155/44. **Antipyrin.** — *Mr. H. S. Naftel* (Aix-les-Bains) writes:—"It may be interesting to your readers to know that since May 1, 1887, we have dispensed in this pharmacy alone 2 lbs. of antipyrin. It has had immense success here, especially in sharp attacks of rheumatism and gout; it is given in 1-gramme doses (15 grains) three times a day, the first dose calming instantly the most acute pain."

To Preserve Walnuts.—*Exoniensis* says:—"Take fine nuts (as used for pickling, before the shell has formed) and pour boiling water on them two or three times, then boil in water until soft. Drain, and cover with a thick syrup made of raw sugar and water. The last I preserved was in July, 1880, and they are perfectly good now."

160/24. *Nocc.*—**Walnut-stains** may be removed from the fingers with *liquor potassæ.*

161/31. *Carbuncle.*—The preparation of concentrated waters was fully treated in our Diary for the current year, also notes in the last volume.

160/63. *Juniper.*—A good **Varnish for Labels** is made of equal parts of Canada balsam and spirit of turpentine. The labels should get a coat of size or mucilage before the varnish is applied.

159/49. *A Minor.*—See page 233.

159/52. *Emollient.*—The address of the Cheque Bank is 20 King William Street, London, E.C. For permission to sell stamps apply to the Stamp Department, Somerset House, London, W.C.

161/20. *Cocaine Hydrochlor.*—Full directions for the preparation of concentrated infusions are given in the Diary for 1887. The best way to make **Inf. Aurant. Conc.** is as follows:—Take 8 oz. of orange peel, cut small, pour 8 oz. of boiling water on it, and after an hour pack in a percolator, add another 8 oz. of boiling water, and collect the first 14 oz.

of percolate, add 4 oz. of rectified spirit to this and set aside. Continue the percolation with hot water until 20 oz. more percolate are obtained. Evaporate this to 2 oz., dissolve in the reserved portion and filter. This makes a one to seven preparation.

159/36. *Enquirer* (Clayton).—**Ginger Wine Essence.**—Bruised ginger, 4 oz.; bruised capsicums, 2 drachms; fresh lemon peel, cut small, 3 oz.; proof spirit, 1 pint or q.s. Macerate for a week, strain, press the marc, and mix the expressed liquor with the other, then add 20 drops of essence of jargonelle, half an ounce of spt. æther. nit. B.P., and sufficient proof spirit to make one pint. Allow to stand for a day or two and filter.

To make ginger wine by fermentation, dissolve 2 lbs. of sugar in a gallon of water, add 2 oz. of the essence and a teaspoonful of fresh yeast. Set aside for a week or fortnight, then add two wineglassfuls of brandy, strain the liquor and bottle. Without fermentation the wine is made thus:—Dissolve 4 lbs. of sugar in 5 pints of water, and add to the syrup 2 oz. of the ginger essence, 1 oz. of acetic acid, and a little colouring. Make up to one gallon with water.

161/1. *Enquirer* (Horncastle).—The mixture cannot be prevented from becoming sour as long as you put sugar in it. Try 4 oz. of glycerine instead. **Tasmanian Honey.**—We presume that eucalyptus honey is meant. You will find an account of it in this journal of January 29.

160/45. *T. G. Rose.*—The lotion is an astringent. The mixture is nonsensical, and the recipe for it very badly written. Sellers of scheduled poisons, whether by wholesale or retail, must be "chemists and druggists."

Smelling Salts.—A quickly made, pungent, and lasting smelling salts can be made by adding 1 oz. of liq. ammon. fort. to 4 oz. of sodæ. bicarb. "cryst." in small quantities, placing the soda in a large bottle, adding the ammonia, corking and shaking vigorously for a few minutes. The cork of the bottle should be tied over. Any perfume can be added.

H. C. (162/30.)

162/14. *A Student* (Liverpool).—The factor 0·3184 (amended) in Mr. Allen's formula for calculating the percentage of ethyl nitrite in spt. ætheris nitrosi represents the weight of 100cc. of gaseous ethyl nitrite at 15° C. Mr. Dymond's figure is 0·336, and represents the weight at 0° C., so that Mr. Allen's formula is the better one to use. See full explanation in vol. xxviii., page 30. Sal mineralis is a proprietary article.

159/33. *Robert.*—**Arsenical Soap.**—Soft soap, white arsenic, and slaked lime, of each 4 oz.; carbonate of soda, 12 oz.; powdered camphor, ¾ oz. Mix together in a mortar, and make into a paste with water.

162/46. **Oil of Tartar.**—This is carbonate of potash which has deliquesced by exposure to the air.

160/68. *G. M. Dunn.*—Dextrine should be quite soluble in cold water.

160/21. *A. Malone.*—The names of the alleged ingredients of the **Corassa Compound** are entirely unknown in botanical science. Dr. A. B. Lyons examined the "Rev." Jos. T. Inman's packets five years ago and found the materials to be as follows:—

		Parts.
Powdered gentian	.. .. ..	about 15
,, liquorice	.. .. ..	,, 15
,, sugar ..	.. .. ..	,, 50
Sodium bicarbonate	.. .. ..	,, 17·5
Powdered cochineal	.. .. ..	,, 2·5

Messrs. Parke, Davies & Co. ascertained that "the 'Rev.' Jos. T. Inman" consists or consisted of two young English bloods in New York, who affect "diamonds, fast horses, and faster women."

162/47. *Durham.*—There should be no difficulty in obtaining œnanthic ether from any wholesale drug house. Bisulphite of lime may be used for preserving wines and cordials, but an odour of sulphurous acid is apt to develop in them. Salicylic acid is preferable.

160/22. *Camphor.*—You will find a formula for a good blue-black ink in our issue for March 26, page 401, and another in vol. xxix., page 565. **Black Enamel for Leather.** In the latter volume, page 476, you will find the formula for Nubian blacking. The following recipe is for a composition which gives a good polish without rubbing:—Yellow wax, 18; spermaceti, 6; turpentine, 66; asphalt varnish, 5; powdered borax, 1; Frankfort black, 5; Prussian blue, 2; nitro-benzol, 1. Melt the wax, add the borax, and stir until the mixture appears to gelatinise. Melt the spermaceti in a separate vessel, add to it the asphalt varnish and turpentine, previously mixed, stir well, and add to the wax; then incorporate the colours, and lastly the nitro-benzol, which is merely to impart fragrance to the blacking. Thanks for your suggestion, which is impracticable, however.

159/50. *Dum Spero Spiro.*—A twelfth of a grain of acetate of morphia would fairly represent half a grain of powdered opium; but opium seems to be more efficacious for coughs than morphia is—probably because of the codeia which the drug contains. In the circumstances, however, you are quite safe in using morphia. **Pharaoh's Serpents.**—The formula given on January 1 is for a safe non-poisonous article. The other kind is made of sulphocyanide of mercury.

161/29. *F. E. J.*—We cannot detect anything "active" (but the alcohol) in the sherry which you send.

An Old Subscriber (Great Grimsby).—The following represents the composition of the pills, as near as we can make it out:—Rhubarb, 1 oz.; Barbadoes aloes, 2 oz.; ginger and soap, of each 3 drachms. Make a mass with water, and divide into 4-grain pills.

An M.P.S. (158/38) desires a formula for **Fly and Maggot Oil** miscible with water. Corrosive sublimate is recognised as the infallible cure for maggots. The following is a modification of a formula suggested by Professor Robertson, of the Royal Veterinary College:—

Corrosive sublimate	.. ..	1 oz.
Methylated spirit	.. ..	8 ,,
Spirit of tar ..	.. ..	10 ,,
Powdered quillaia	.. ..	2 ,,
Water to ..	.. ..	1 gallon

Powder the corrosive sublimate, and shake with the methylated spirit until dissolved; then add the quillaia and a pint of water. Macerate over night, and add the spirit of tar and the rest of water; occasionally shake well for a day or two, and strain.

162/26. *W. R. Fowler.*—The **Food for Diabetic Patients** should be anything which is not changeable into sugar. Well cooked (broiled or roasted) beef is the staple article of diet, and the vegetable food should consist of toasted bran or gluten bread. By hydrocarbonised food starchy food is meant, and the albumenoids include such articles as eggs, cheese, and milk. Although alcohol is generally prohibited, claret and porter have been recommended as beverages by specialists.

52/163. *Chemist.*—We do not take upon ourselves the responsibility of *advising* emigration to Australia. We have stated on many occasions that there are fairly good chances for from ten to twenty qualified English chemists annually;

but success depends so entirely on personal qualifications that we should be reckless indeed if we recommended emigration to persons entirely unknown to us. It is unwise to go out without being first qualified here, and it would be very unwise for anyone to go out and start in business at once. It is much better to commence as an assistant. To make yourself familiar with pharmaceutical affairs in Australia, we advise you to subscribe for *The Chemist and Druggist of Australasia*, which can be obtained through us for 5*s*. per annum.

16/163. *W. G.*—You will see that the concern you allude to is being wound up.

163/24. *A. J. W.* (Boulogne-sur-Mer). — **Amsterdam Quinine Works.**—In our last issue the capital is given in Dutch florins (12 florins equal to about 1*l*.). All the figures are correct except the English rendering of the share value, which, through a printer's error, is stated at 12*l*. instead of about 42*l*., the real equivalent of 500 florins.

163/48. *Grateful.*—You will find a formula for **Effervescing Saline** in our issue of July 9, page 56. **Bay Rum.**—Oil of bay, ʒvj.; oil of pimento, gtt. 25; acetic ether, ʒj.; rectified spirit and Jamaica rum, of each 1 gallon.

163/2. **Salol.**—We gave full information regarding this new remedy when it was introduced (see vol. xxix. pp. 243, 607, and 772), and we published an article by Mr. Norman Tate in our issue of February 26, p. 261.

163/31. *Em.* — **Face-lotion.** — Corrosive sublimate, 1 grain; Corbyn's calamine, 2 drachms; glycerine and eau de cologne, of each ½ oz.; water to 6 oz. Mix. Other formulæ will be found in back numbers.

163/20. *Dye.*—**Brown Hair-dye.**—Pyrogallic acid, ʒss.; sodium sulphate, ʒss.; rectified spirit, ℥j.; water, ℥iij. Dissolve the acid in the spirit and the sulphate in the water. Mix the solutions.

Selenium (163/74).—See the Educational Number. *W. H. Sumbur* (164/32).—Blaud's pills are used for anæmia, and are supposed to be more active than **Pil. Ferri Carb. B.P.** *Notts* (164/35).—The information will be found in Begbie's "Medical Information and Advice" (Nelson, 2*s*. 6*d*.) *Dolor* (164/29).—See reply to *Dentist*.

The Schoolmaster Abroad.—*W. J. H.* informs us of the fact that in the market-place of a small English town there is a very bold sign upon which occurs the mystic title "Chemist and *Drugist*." The gentleman whom this sign designates was a schoolmaster before he turned chemist, and is an authority on spelling—badly.

Evanescent Ink.—"It is a sad commentary on the chemical skill of the members of the Pharmaceutical Society," writes a correspondent, "that the signatures on so many certificates of examination and diplomas should be already so faded as to be invisible at three or four yards distance. The signatures on the one before the writer now look as if written with dirty water, and its date is only 1876. Surely good ink can be bought, if it cannot be made, by those concerned."

Spices and Condiments.—"Some time since," writes a correspondent, "you convinced me of the importance of cultivating this branch of business, which is at present largely in the grocers' hands, and the result encourages me to go on."

Graduated Bottles.

SIR,—No reliance can be put on the graduations of dispensing bottles, and when patients do not use a reliable measure, the only other way to insure correctness of doses is (as is our custom in all cases where an overdose might produce toxic effect) to gum a thin slip of paper up the back of the bottle, and, having compounded the mixture in a suitable measure, measure each dose separately, place it in the bottle, and with a pen mark on the slip where each dose comes up to. Volatile preparations require a little consideration, but they can be added with the last dose, allowance being made for them in the measurement of the bulk.

Whilst on the subject of measures, I may say that I sometimes find verified (?) measures incorrect, or, rather, they do not agree with each other. It is hard to say which one is correct. Perhaps someone will give his experience in the matter. I wonder what would be the result of a prosecution for having an incorrect verified measure!

Yours faithfully,
DUM SPECTAS FUGIO. (163/30.)

[See THE CHEMIST AND DRUGGIST, 1881, page 76, for a full report of a prosecution for using incorrect verified measures.]

SIR,—It is evidently the duty of bottle-makers to pay more attention to correct graduation. I am of opinion that the more satisfactory method of getting the dose intended is by graduations on the bottle, than by the use of graduated measure glasses. With the latter all kinds of mistakes are made, especially by ladies.

Yours truly,
HEDER.

Medical Spoons.

SIR,—Having read the letter of your correspondent "Lignum" on "Graduated Bottles," and also bearing in mind the unsettled controversy as to the relative value of the terms "two teaspoonfuls" and "dessertspoonful," I feel impelled to say a word or two on the subject of doses and their administration.

It appears to me it will be a long time ere the various excellent glass and other medicine measures will be found generally in use; and in the meantime the physician and dispenser will continue to find their efforts baffled by the uncertainty attending the use of ordinary domestic spoons. Can nothing be done to reduce this danger to a minimum? Is it not possible to introduce spoons of actual reliability as to capacity, having some authoritative stamp, and recognised as the "medical" spoon, or "official," or whatever name might be most suitable?

If such articles were in actual existence, and doctors and chemists combined in an effort to establish them, I think all difficulty would vanish. A persistent use of the name "medical teaspoon," for instance, would cause inquiry to be made, and few persons, I fancy, would entirely ignore the wishes of their medical advisers in the matter.

Something surely ought to be attempted to put an end to all uncertainties in the administration of doses, and which would settle, once for all, whether dessertspoons ought to hold two drachms or three.

Yours, &c.,
SPES. (8/19.)

Information Wanted.

[*Replies to the following requests are solicited by correspondents of* THE CHEMIST AND DRUGGIST.]

160/19. Where can "Granville's Greek Ointment" be obtained?

Cinder Tea.—What is the reason of water in which a hot cinder has been dropped being so efficacious in infantile gripes? This water is sold in Lancashire under the name of "Cinder tea." F. B. T. (161/43.)

Stockholm Tar and Aqua Fortis.

A farmer requires an ointment made of 1 oz. of the acid and 5 oz. of the tar. How can it be done? The mixture effervesces and sets as hard as pitch. HEDER.

Seaside (158/67) asks:—"Can anyone inform me if it is possible to get shop-drawers proof against a damp atmosphere, as I find it impossible to keep drugs, and especially powders, dry in mine?"